

Current History

A WORLD AFFAIRS MONTHLY

NOVEMBER, 1975

THE AMERICAN ECONOMY

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Current History

NOVEMBER, 1975

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In this issue, seven economists evaluate the strengths and weaknesses of the American economy, tracing the history of the economy and analyzing our problems today. According to our introductory article: "If past experience with severe economic difficulties is any guide, it seems reasonable to predict that there will be some change in the economic policy and role of the government in the near future."

The American Economy: An Overview

BY ROBERT J. LAMPMAN

Professor of Economics, University of Wisconsin

IN 1974, the gross national product (GNP)—that is, the market value of all goods and services produced during the year—of the United States amounted to \$1.4 trillion. Sixty-three percent of this total was purchased by consumers; 15 percent went to business for capital replacement and expansion; and 22 percent was used by federal, state and local government. Roughly 10 percent of total production was purchased by foreigners, but this was approximately balanced by imports. Goods represented a little more than half of the value of total output; the remainder was in the form of services. Manufactured goods were about one-third, and agricultural output only 4 percent, of total GNP.

With the nation's population in that year numbering 212 million, the per capita GNP was \$6,589, which ranked the United States among the richest nations in the world. In the 1960's, United States per capita GNP was twice that of England, five times that of Japan, and 12 times that of Brazil. With 6 percent of the world's population, the United States produced almost 40 percent of the world's output.¹

In the 27 years after 1947—which marked the end of the postwar reconversion—the GNP increased in dollars of constant purchasing power by 165 percent. (See Table 1.) In the same period, the population increased by 47 percent. Hence, per capita GNP increased by 80 percent, or about 3 percent per year. That rate of growth in production was moderate by

world standards and was well below the 10 percent rate sustained by Japan during much of this period. This means that many countries were catching up to United States levels of production during those years, and a few, e.g., Canada, West Germany, Sweden, and Switzerland, are now at approximately the same level as the United States.

The median United States family income was \$12,051 in 1973. This was double what it had been in 1947 in constant dollars. Per capita personal consumption was up only 78 percent, but per capita government purchases of nondefense goods and services, representing collective purchases of such things as schools, roads, and parks, were up 196 percent. The combined total of personal consumption and nondefense government purchases, which may be a fair indicator of consumer welfare, was up 91 percent on a per capita constant dollar basis. So it is roughly true, although many qualifications could be entered having to do with changes in leisure, family patterns, environmental quality, and non-marketed production, that the consumer's well-offness has nearly doubled in the postwar period.

An understanding of the structure of the economy can be gained by studying the relationship between GNP and personal income. GNP less capital consumption allowances and indirect business taxes is called national income. The latter amounted to \$1.1 trillion in 1974. National income less all corporate profits in excess of dividends and business contributions for social insurance plus government transfer payments and interest paid by government and con-

¹ Irving B. Kravis, "A World of Unequal Incomes," *The Annals of the American Academy of Political and Social Science* (September, 1973), pp. 61–80.

Table 1: Selected U.S. Production and Consumption Data for 1947 and 1974

Item	1947	1974	Percentage change in 27 years
1. GNP in current dollars	\$ 231 billion	\$1,397 billion	504
2. GNP in 1958 dollars	\$ 310 million	\$ 821 billion	165
3. GNP per capita in 1958 dollars	\$2,152	\$3,882	80
4. Population	144 million	212 million	47
5. Personal consumption per capita in 1958 dollars	\$1,431	\$2,548	78
6. All government non-defense purchase per capita in 1958 dollars	\$ 174	\$ 509	196
7. Number 5 plus number 6	\$1,605	\$3,057	91

Source: *Economic Report of the President Together with the Annual Report of the Council of Economic Advisors* (Washington, D.C.: U.S. Government Printing Office, 1975), Tables C-1, C-2, C-5, C-6, and C-18.

sumers equals personal income. This was \$1.2 trillion. Personal taxes of \$171 billion left \$980 billion of disposable personal income. Of this amount, \$77 billion, or 8 percent, went to personal saving and the remainder went to personal consumption.

The most important sources of personal incomes are wages and salaries and other labor income, which amounted to 70 percent of the total in 1974. Proprietors' income was 8 percent. Rents, dividends, and interest combined were only 14 percent of total personal income and were almost matched by transfer payments (social security benefits, less personal contributions to pay for them, unemployment compensation, veterans' benefits, and public assistance), at 10 percent. If we consider property income to include half of proprietor's income, rent, interest, and the full amount of corporate profits, then such income is approximately 25 percent of national income; the remaining 75 percent may be thought of as "return to labor."

INCOME INEQUALITY

The median family money income, as we noted above, was \$12,051 in 1973. Sixty percent of all American families were clustered in a narrow range between \$6,081 and \$19,253. The one-fifth who received less than \$6,081 received only 5.5 percent of total family income; the top one-fifth with incomes

of \$19,253 or more, received 41.1 percent of the total. The top 5 percent, with incomes above \$30,000, received 15.5 percent of all family income. This pattern of inequality has remained virtually constant throughout the postwar period in spite of enormous changes in the size and composition and geographic locations of the population and in the industrial and occupational distribution of the labor force. Some changes, such as the employment of more women, increased educational attainment, and increases in transfer payments, which probably reduce inequality, have been offset by other factors, such as the decline in the size of the family, the increasing number of broken families, and earlier retirement.

Some of the changes in the structure of the economy in the 1947-1974 period are reflected in changes in the labor force. (See Table 2.) The labor force increased about 50 percent, but the number of employed went up by only 30 percent, while the number of women workers more than doubled. The number working in agriculture went down by 60 percent; the number in mining declined 30 percent. The greatest increase in employment was in state and local government, which more than tripled; and in wholesale and retail trade, finance, insurance and real estate, and services, all of which approximately doubled. These shifts have undoubtedly worked to the disadvantage of the less educated and less skilled members of the labor force.

The pattern of income inequality is somewhat lessened by the moderately progressive combined federal, state, and local tax system which takes about one-third of income. This system is roughly proportional throughout the income range of 90 percent of all families and progressive throughout the top 10 percent of incomes.² Benefits in-kind from government programs—notably education, health care, and food stamps—also offset some of the reported inequality of money income. The total tax burden rose from 25 percent of GNP in 1947 to 32 percent in 1974.

While the data show no narrowing of overall income inequality since 1947, there has been some narrowing of intergroup income differentials. Thus, black family incomes were 51 percent of white family incomes in 1947, and 60 percent of white family incomes in 1973. There also has been a narrowing of farm and non-farm incomes and of North-South incomes differences. On the other hand, women's incomes, particularly those of white women, have not risen with respect to incomes of men. Some of the narrowing of intergroup differences was facilitated by massive migration from farm to city and from low income to higher income regions.

The existing pattern of inequality is better understood by a look at the differing compositions of the several income groups. The top 10 percent is disproportionately comprised of families headed by white,

² Joseph A. Pechman and Benjamin Okner, *Who Bears the Tax Burden?* (Washington, D.C.: The Brookings Institution, 1974).

prime-age, working males; multiple-earner families; families residing in northern metropolitan areas; and families headed by those of high educational attainment who are in managerial, professional and technical occupations. The bottom 10 percent of families—which is not quite the same as the 12 percent of the population currently below the official poverty lines—is disproportionately made up of aged, nonwhite, and female-headed families; southern and nonmetropolitan residents; and those with low educational attainment and relatively unskilled occupations. Contrary to the popular impression, income increases with increased family size up to five persons. The top fifth of families ranked by income has 20 percent of all the children and 27 percent of the earners; the lowest fifth has 16 percent of the children and 11 percent of the earners. In 1973, 44 percent of all the income going to the bottom fifth of families ranked by income was in the form of transfer payments.

DECLINE OF POVERTY

While income inequality has been remarkably constant, there has been a decline in poverty as measured against the fixed purchasing power poverty-income-lines drawn by the Social Security Administration.³ These lines vary by family size and approximate \$3,000 of money income in 1962 dollars for a four-person family. In 1973, this amounted to \$4,540 in current dollars. In 1959, 39 million persons—or 22 percent of the population—were below these lines. In 1969 this number had fallen to 24 million—or 12 percent of the population. The next four years were years of slow reduction of poverty, and the percentage of poor was 11 in 1973. The next year saw a reversal in the trend—the number of poor increased to 12 percent of the population. It is likely that this number will increase again in 1975.

One startling fact is that pre-transfer poverty—that is, poverty measured in terms of total money income less transfer payments—actually increased between 1965 and 1972.⁴ This suggests that, even in those relatively prosperous years, income poverty (an increasing part of which is associated with female headship of families) would not have been reduced had it not been for generous increases in cash transfers. These transfers are part of a broader pattern of “social welfare expenditures,” which tend to be pro-poor in effect, and which have been rising rapidly. Expenditures by federal, state and local governments for

³ U.S. Bureau of the Census, *Characteristics of the Low-Income Population: 1973*, Series P-60, no. 98, January, 1975.

⁴ Robert Plotnick and Felicity Skidmore, *A Review of Recent Trends in Poverty and Anti-Poverty Policy* (New York: Academic Press for the Institute for Research on Poverty, forthcoming).

⁵ See January issues of the *Social Security Bulletin* for annual reports on social welfare expenditures (Washington, D.C.: U.S. Government Printing Office).

Table 2: Selected Data on U.S. Labor Force and Employment by Industry, 1947 and 1974

Item	1947 (in millions of persons)	1974
1. Civilian labor force	59.4	91.0
2. Employed persons	57.0	86.0
3. Employed males	41.0	52.5
4. Employed females	16.0	33.4
5. Total employed in agriculture	7.9	3.5
6. Total employed in mining	1.0	0.7
7. Total employed in contract construction	2.0	4.0
8. Total employed in transportation and public utilities	4.2	4.7
9. Total employed in wholesale and real estate	9.0	17.0
10. Total employed in finance, insurance, and real estate	1.8	4.2
11. Total employed in services	5.1	13.5
12. Total employed in federal government	1.9	2.7
13. Total employed in state and local government	3.6	11.6

Source: *Economic Report of the President Together with the Annual Report of the Council of Economic Advisors* (Washington, D.C.: U.S. Government Printing Office, 1975), Tables C-24, C-25, and C-29.

social insurance, education, public aid, health programs, veterans' programs, housing, and other social welfare programs amounted to \$242 billion in 1974—well over \$1,000 for every man, woman and child.⁵ They were equal to 18 percent of GNP in 1974, but were only 9 percent of GNP in 1950. These expenditures have increased particularly fast since 1965, partly due to the introduction of new federal programs like medicare and medicaid, federal aid to education, and food stamps.

About 40 percent of all social welfare expenditures apparently went to the pre-transfer poor in 1965 and in 1972. Hence, the relevant increase for the poor was from \$31 billion to \$77 billion. The latter amount means that the share of the pre-transfer poor in “money and in-kind income”—including cash transfers and such non-money items as education and food stamps—was 9 percent. This was about three times as great as their 3 percent share in pre-transfer money income. That conversion is one measure of the American effort to reduce poverty.

DISTRIBUTION OF WEALTH

The stock of national wealth is in the form of land and durable consumer and producer goods. The value of all such wealth is usually about five times the national income. Hence, in 1974, it was probably about \$5.5 trillion. Land values amount to about one-sixth of the total, and consumer wealth, as opposed to producer wealth, is an important part of the

total. One-fifth of the nation's tangible assets are owned by governments. About one-third each are held by households and corporations; about 15 percent is in the hands of farmers and other non-corporate businessmen. Non-profit organizations like churches and charitable foundations own only 2 percent of tangible wealth.

On a net basis, the personal sector, along with non-profit organizations, holds full claim to the tangible assets of the business sector. Personal sector wealth, in the form of tangible assets and intangible claims on business and government wealth, is much more unequal in its distribution than is income. This is partly because wealth accumulation is strongly associated with age, and wealth is concentrated in the older half of the adult population. According to the latest study on the subject, in 1969 the richest 1 percent of the population held 23.8 percent of the nation's total assets, 51 percent of the corporate stock, but only 14 percent of the real estate.⁶ According to earlier studies, the top 10 percent of spending units, ranked by net worth, held 60 percent of the nation's net worth, and the bottom 20 percent had no net worth.⁷ The top 10 percent, ranked by income, receive 30 percent of the national income. We know from other sources that only about half of all families receive any dividends, interest, or rental income and that only 1.5 percent report more than \$10,000 of such income.⁸ The occupational groups of self-employed, managerial, and professional persons are heavily over-represented in the upper reaches of both income and wealth distribution. There appears to be no clear trend toward either a diminishing or an increasing concentration of personal wealth since 1947.

CONCOMITANT INFLATION AND RECESSION

The American economy was performing quite satisfactorily in the mid-1960's, with an annual growth rate of about 6 percent, unemployment down to about 4 percent, consumer prices rising by 2 percent, the size of the poverty population shrinking by several million per year, and no great problem on the balance of payments front. However, by 1969 signs of trouble began to appear. These included price increases and indications that the United States dollar was over-valued on the foreign exchanges. The government took fiscal and monetary steps to cool off the economy in 1970 and, in 1971, suspended gold pay-

ment for dollars and instituted price and wage controls. The dollar was devalued by 23 percent in 1973. These measures did not succeed in reducing inflation, which reached an annual rate of 6 percent in 1973, even with unemployment at 4.9 percent.

But this was only a prelude to the great inflation of 1974, when prices rose 11 percent, with unemployment at 5.6 percent. The first half of 1975 saw a slowdown of price rises to well under 10 percent, while unemployment soared to a post-war high of 9 percent. Total production fell by 2 percent in 1974 and another 4 percent in 1975 to make this the most profound recession since the 1930's. The gap between actual and potential GNP swelled to 14 percent—or over \$200 billion—by early 1975.

This paradoxical combination of inflation and great slack in the economy—the latter measured by the unemployment of labor and unutilized plant and equipment—is thought to be due to an unusual set of circumstances and events on the domestic and international front. Leading among these factors are the failure to balance the federal budget at high employment in the late 1960's and in 1972, a quick rise in the price of imports following the dollar devaluation of 1973, the distorting effects of short-run wage-price controls, the appearance of capacity shortages in certain basic materials industries in 1973, the worldwide food shortages in 1973 and 1974, and the fourfold rise in oil prices dictated by members of OPEC. All these factors contributed to the extraordinary changes in production and prices and their accompanying falls in employment and real income.

The unpredicted severity of the recession in 1975 is partly explained by the continuation of tight monetary and fiscal controls until well after the recession began, and by an unexpected lack of consumer interest in new houses and new cars. By mid-1975, it began to appear that the worst of the inflationary burst was over and that production was starting to recover. But policy makers were still concerned that inflation might be rekindled if recovery and reemployment proceeded too rapidly. Many observers believed that unemployment would remain well above 6

(Continued on page 197)

⁶ James D. Smith and Stephen D. Franklin, "The Concentration of Personal Wealth, 1922-1956," *Proceedings of the American Economic Association*, May, 1974.

⁷ Survey Research Center 1962 Survey of Consumer Finance, monograph no. 32, (Ann Arbor: University of Michigan Press, 1963). Also see, Dorothy S. Projector, "Survey of Financial Characteristics of Consumers," *Federal Reserve Bulletin* (March, 1964), p. 285.

⁸ U.S. Bureau of the Census, *Current Population Reports: Consumer Income, 1973*, Series P-60, no. 97, Table 50, pp. 103-4.

Robert J. Lampman is a fellow of the Institute for Research on Poverty at the University of Wisconsin. He is author of *The Share of Top Wealth-holders in National Wealth, 1922-1956* (Millwood, N.Y.: Kraus-Thompson Organization, Ltd., 1973), and *Ends and Means of Reducing Income Poverty* (Chicago: Rand McNally College Publishing Co., 1971), and has served as editor of the *Journal of Human Resources*. He has also been a research associate at the National Bureau of Economic Research and a staff member of the Council of Economic Advisors.

"Congress has given authority over monetary policy to the Federal Reserve to move the economy toward its long-run objectives. Congress then has expected the Federal Reserve to use monetary policy, virtually alone, to smooth the economic aberrations that have occurred."

United States Monetary Policy

BY HELEN B. O'BANNON

Associate Dean, Carnegie-Mellon University

AMERICANS have come increasingly to rely on monetary policy to assuage or cure the nation's economic pains. Concomitantly, the discretionary authority and responsibility for the conduct of monetary policy of the independent board of governors of the Federal Reserve System have been increased with a grant of broad and far-reaching powers.

Defined narrowly, monetary policy involves the regulation of the supply of money by some agency or institution of the federal government in order to preserve or attain national economic objectives. Defined in a broader sense, monetary policy includes not only concern with the supply of money and the liabilities of commercial banks (demand and time deposits) but also with bank credit and commercial bank assets (loans and investments). Monetary policy is conducted within the political, philosophical, cultural and economic environment of the time. It influences and is influenced by the environment and by the particular institutional framework of the period. Over time, these environmental forces have changed dramatically, paving the way for drastic changes in the conduct of monetary policy.

Throughout the nation's history, several major trends in federal policy toward economic and monetary matters are evident. At the beginning of the republic, Congress interpreted its economic powers in a narrow and legalistic fashion. Legislation with regard to economic and monetary matters was specific; delegation of authority to the federal agencies was very limited.

As Congress became more aware of the complexity of the economy and its interdependence with other factors in the economic, political and social systems, it began to define the federal government's responsi-

bility "for the general welfare" more broadly. Under its constitutional authority "to coin and issue money," Congress passed far-reaching legislation with regard to the economy. When Congress realized that narrow rules and specific legislative structures were too inflexible and unresponsive to a dynamic economic system, it created a new institutional framework and defined its economic responsibilities in broad and flexible terms. Congress then delegated discretionary authority to design and implement specific policies that would carry out its intentions.

During and following the American Revolution, the dominant economic philosophy was mercantilism, that is, a national concern with the promotion of business and trade. Therefore, banks were chartered by the states to re-establish business and commerce; they also made loans to the colonial government. The constitution gave monetary authority to the new federal government, which coined and issued the only legal money. However, paper bank notes, issued by state-chartered banks, circulated as an important medium of exchange, and some members of the federal government felt that these notes should be controlled. Hence, the new government exercised its monetary control by requiring 100 percent specie backing for all paper bank notes.

The chartering of the First Bank of the United States in 1792 was an attempt on the part of the federal government to interpret its constitutional powers more broadly and to delegate responsibility for economic matters. The chartering was a major step toward the establishment of a federal institution that would function like a central bank. The bank issued paper notes that were deemed lawful payment for debts to the federal government, and it controlled the issuance of paper notes by specie.¹ Thus, the bank brought stability to the banking system.

Within a comparatively short period, however, the political and philosophical climate changed. A fed-

¹ Bray Hammond, *Banks and Politics in America from the Revolution to the Civil War* (Princeton, N.J.: Princeton University Press, 1967).

erally chartered bank that competed with the local, state-chartered banks and exerted control over their issuance of bank notes was unacceptable to the dominant populist political forces and their emerging laissez-faire, agrarian economic philosophy.

The Second Bank of the United States was opposed not because it had broad discretionary economic powers, but because it had been given powers that exceeded Congress' constitutional authority. In addition, the bank's policy of redeeming state bank notes for specie was an effective and onerous curb on expansive state banking practices and represented too much economic power centralized in an agent of the federal government.² As an institution with quasi federal agency powers, the Second Bank of the United States had assumed responsibility for the implementation of a monetary policy that sought to preserve the integrity of, and public confidence in, a major component of the medium of exchange.

The rechartering of the Second Bank of the United States became a major political issue in the 1828 and 1832 presidential campaigns of Andrew Jackson. Jackson's veto of the recharter ended the life of the bank.

After 1832, the federal government withdrew its interest in, and concern with, the banking system. It accepted only specie in payment; it eventually withdrew all its funds from state banks and held these cash balances in independent treasury institutions. Federal monetary policy was narrow, and its control mechanism was specie. The government was unconcerned with the impact on commerce of an unstable, unregulated banking system. Lack of confidence in state banking institutions and the medium of exchange created frequent, severe economic crises that the federal government chose to ignore.

It was not until 1860, more than 25 years later, that Congress exhibited any active concern with the institutional network of banking and its relationship to trade, interstate commerce and the preservation of the nation. The Civil War dramatically altered economic and political philosophies. The secession by the southern states was viewed by some as the ultimate assertion of states' rights. To preserve the nation and avert secession, the federal government had to respond quickly and definitively. Under pressure of war and the extreme scarcity of specie, Congress interpreted its constitutional power "to issue and coin money" more broadly than ever before. It issued paper currency (greenbacks) and declared it legal tender. Confronting a banking system in disarray and a medium of

exchange of questionable value and legitimacy, Congress passed legislation that established a national banking system and a uniform currency. In the same act, Congress created a ready demand for federal government debt issues that was essential to the success of its war financing efforts. Reserve requirements of specie were established against bank notes and deposits. These requirements were designed to protect depositors and to assure national bank liquidity. However, no central institution was created with authority to underwrite the stability of the banking system or to affect economic activity.³

Prior to this period, the United States had issued only full-bodied gold and silver coins. Under the Coinage Act of 1791, the United States had declared the dollar to be the monetary unit of account and had fixed its value in terms of silver and gold. Many other countries adhered either to bimetallic systems or to monometallic systems based on gold or silver. By defining the dollar in terms of a metal that other countries used to define their currencies, the United States had fixed the price of the dollar in terms of other countries' currencies; and this facilitated trade.

There were periods between 1791 and the Civil War when the established mint ratio between gold and silver in the United States was out of parity with the mint ratios in other countries. Gold or silver would be shipped abroad, exchanged for the other metal at an advantageous rate, returned to the United States and converted into dollars at a profit.

The United States abandoned strict adherence to bimetalism and convertibility when it issued greenbacks. In 1879, Congress formally rejected bimetalism and established an unlimited gold coin standard. Under this standard, gold coins would be issued in unlimited amounts with 23.22 grains of gold to the dollar, and gold certificates would be issued against full gold backing. As a result of this legislation, changes in the nation's stock of monetary gold exerted powerful, almost automatic, pressure on the supply of money and credit conditions, regardless of the overall desirability of such economic responses. Although there were problems associated with gold flows, international trade flourished under the gold standard without major dislocations.⁴

Despite the establishment of a national bank system and the gold coin standard, domestic economic problems persisted. Although the United States had a safe and uniform currency backed by, and convertible into, gold, the supply was inflexible in the face of imminent bank failures; when bank customers rushed to convert their deposits into currency, the supply of currency was not adequate. Furthermore, there was no institution with emergency power to authorize the printing of more currency to avert the crisis; nor was there a mechanism or authority to increase bank reserves. Congress was unwilling to assume this much

² Samuel Eliot Morison, *The Oxford History of the American People* (New York: Oxford University Press, 1965), p. 440.

³ Philip Cagan, "The First Fifty Years of the National Banking System—An Historical Appraisal," in D. Carson, ed., *Banking and Monetary Studies* (Homewood, Ill.: Irwin, 1963), p. 17.

⁴ George Prather, *Money and Banking*, 9th ed. (Homewood, Ill.: Irwin, 1969), pp. 27–31.

authority under the constitution, and then to delegate it to a federal agency.

THE FEDERAL RESERVE ACT OF 1913

Recurrent bank crises in 1873, 1884, 1893 and 1907 precipitated congressional concern, which resulted in the passage of the Federal Reserve Act in 1913. The purpose of the Federal Reserve Act was "to furnish an elastic currency, to afford means of rediscounting commercial paper, to establish a more effective supervision of banking. . . ." The Federal Reserve Act created a federation of 12 regional banks without much discretionary authority, rather than a strong, independent and powerful central bank. The Reserve banks were to hold the required reserve balances of member banks. It was thought that these reserves, held by institutions separate from the commercial banking system, would always provide adequate liquidity. Member banks could obtain additional reserves by borrowing against or selling narrowly defined eligible paper to the Reserve banks at a discount. The initiative for such action, however, rested with the commercial banks, not with the Reserve banks.

A new currency was established—Federal Reserve bank notes. These notes had to be backed by at least 40 percent gold and eligible paper; thus, the supply of notes was still constrained by gold stocks and vulnerable to international gold flows.

The Federal Reserve began its operations at the outbreak of World War I, and its initial activities occurred under abnormal economic conditions. It had to cope with inflationary pressures and the exigencies of war financing. When World War I ended, many countries that had suspended convertibility of paper currency into gold or silver returned to the gold standard. For political reasons, these countries maintained prewar exchange rates, ignoring the effects of wartime inflation on domestic price levels. As a result, major dislocations occurred in the balance of payments between countries when trade was resumed. The gold standard was not a sufficiently flexible instrument. Economic disruptions continued; during the worldwide depression of the 1930's and during World War II, country after country abandoned the gold standard.

The United States changed its policy with regard to gold in the 1930's. It declared that its currency would not be redeemable in gold by private individuals, that gold coin would not circulate and that citizens would not be permitted to hold gold. Gold would be held by the federal government in bullion form as fractional banking against both member bank reserves and the paper currency issued by the Federal Reserve. These requirements theoretically limited the

new, broader discretionary powers of the Federal Reserve in the conduct of monetary policy by continuing a tie to gold.

The Federal Reserve Act was a compromise with the populist political forces that continued to fear the centralization of economic power in a single central bank. Conduct of monetary policy was to be carried out under narrow guidelines. In the early 1920's, however, the Reserve banks discovered accidentally that when they bought and sold financial assets for their own portfolios, they affected member bank reserves, interest rates and general economic conditions. The Reserve banks had no direct legislative authority to influence dynamically the economy in this way, and their nascent open market operations were usually uncoordinated and uninfluential.⁵

In summary, the Federal Reserve Act of 1913 grafted a federation of regional Reserve banks onto an existing banking structure that was already fragmented between state and federal control. It provided an institutional framework to remedy some, but by no means all, of the ills of the commercial banking system. The Federal Reserve banks could extend credit to member banks only on the basis of narrowly defined eligible paper. The Federal Reserve could not control excessive stock market speculation. It had no authority over the rates of interest paid by member banks on deposits. It had to rely on bank examination to detect speculative loans. It had insufficient authority to use its instruments of monetary control in a dynamic manner.

RESTRUCTURING THE SYSTEM

The Great Depression revealed the weaknesses of the commercial banking system and of the central bank institution. Crisis-oriented legislation of the early 1930's produced fundamental changes in the banking system itself, in the federal government's role in that system, and in the structure and responsibility of the Federal Reserve. That legislation marked a dramatic change in the federal government's assumption of responsibility for the functioning of the economy. Moreover, Congress delegated a great deal of this newly assumed authority to various federal agencies, including the Federal Reserve.

Through the board of governors, the Federal Reserve was given explicit responsibility for the management of the money supply. The board was to devise and implement monetary policies that would promote stability and real economic growth. Out of a profound, far-reaching economic collapse that devastated the commercial banking system came a strengthened central bank, responsible not only for protecting this system from failures but also for affecting the prevailing economic conditions.

It is ironic that this authority and discretion were vested in the Federal Reserve when the dominant

⁵ Lester V. Chandler, *Benjamin Strong, Central Banker* (Washington, D.C.: The Brookings Institution, 1958).

economic philosophy was shifting away from monetary policy toward fiscal policy. Under an emerging yet strong Keynesian influence, the federal government undertook bold economic programs designed to stimulate economic recovery from the Depression. The 1930's constituted an era of strong fiscal policy, including provision for public works and transfer payments, and monetary policy was left in the shadows. Thus, during the 1930's, the Federal Reserve Board moved haltingly under its new authority. In retrospect, its actions appear to have been counterproductive as a stimulus to recovery. In fact, real recovery did not occur until the country began to mobilize for war.

At the outbreak of World War II, fiscal and monetary policies were turned to assisting the war effort. The Federal Reserve Board announced that monetary policies would facilitate the Treasury's wartime financial needs. The Federal Reserve was prepared to purchase at specified prices all government securities offered by banks and other debt holders in order to maintain artificially low levels of interest rates on government debt. The Federal Reserve ignored the impact of its purchase on member bank reserves and on the money supply. From 1939 to 1945, Federal Reserve holdings of United States securities rose from \$2.3 billion to \$24.0 billion,⁶ and the money supply increased from \$36 billion to \$102 billion.⁷ The banking system was awash with reserves; the economy was afloat with money. Congress gave the Federal Reserve authority to impose selective credit controls to restrict private borrowing that was not essential to the war effort. These controls were effective in a narrow sense, but were inadequate tools for maintaining macroeconomic stability.

After the war, there was a difficult period of economic readjustment. The Federal Reserve tried to dampen inflationary pressures by raising the discount rate and maintaining reserve requirements at or near the maximum permitted by law. The effectiveness of these contractionary monetary policies was undermined, however, by the Federal Reserve's continuing accommodation to the Treasury. Moreover, the dominant economic concern at the end of the war was not inflation but unemployment; memories of the Depression were not easily forgotten. Congress passed the Employment Act of 1946 that made explicit its macroeconomic objectives and established guidelines for the implementation of economic policy by agencies of the federal government.

Internal conflicts between the Treasury and the Federal Reserve were frequent in the postwar period.

⁶ Lester V. Chandler, *The Economics of Money and Banking*, 5th ed. (New York: Harper & Row, 1969), p. 482.

⁷ *Ibid.*, p. 484.

⁸ Lawrence V. Ritter, "Official Central Banking Theory in the U.S., 1939-1961," *Journal of Political Economy* (February, 1972), pp. 24-27.

Finally, in 1951, with inflationary pressures increasing as a result of the Korean War, the Federal Open Market Committee decided that it could no longer artificially peg the prices of government securities if it were to maintain price stability. Fighting inflation had a higher priority than facilitating the financing of the Korean War effort at ridiculously low interest rates. The Treasury and the Federal Reserve reached an "accord" in March, 1951. Independence from the Treasury and responsibility for the design and conduct of monetary policy were reestablished at the Federal Reserve.

The conduct of monetary policy in the 1950's was difficult because the economic environment was vastly different from the 1930's. The economy had strong inflationary tendencies that had to be restrained. The national debt was enormous and widely held. Open market operations affected more sectors of the economy directly and more quickly than they had in the 1930's. The Federal Reserve moved cautiously in its regulation of the flow of money and credit. It appeared to lack confidence in its own authority and discretion and tried to establish rules to guide its use of control instruments. It declared that open market operations would be confined to short-term securities—bills only. It would not purchase any new Treasury offering, and would not purchase securities in the open market of comparable maturity at the time of a new Treasury offering. Throughout the decade, the Federal Reserve did develop experience in using its policy instruments in an anticyclical manner, hoping to restore price stability in periods of inflation and to stimulate recovery during economic downturns.⁸

By 1960, other economic problems were present. The economy appeared to be stagnating despite expansive fiscal and monetary efforts. Continual balance of payments deficits had eroded the gold and international currency reserves of the United States and its credibility abroad. Domestic economic conditions called for expansive monetary policy while the international situation demanded restrictive credit policies.

Congress, the Treasury and the Federal Reserve took several policy actions that were designed to reduce American expenditures in order to tie United States loans and grants abroad to the purchase of American goods, to discourage investment of short-term and long-term funds in foreign securities by Americans and to influence foreign exchange rates through purchases and sales of foreign currencies as well as gold. Open market operations, changes in reserve requirements, and changes in the discount rate were expansionary. The Federal Reserve also tried to influence the structure of interest rates through open market operations in cooperation with the Treasury's debt management operations. By pushing interest rates on short-term securities higher, relative

to long-term rates, the Federal Reserve sought to attract volatile short-term funds to the United States and to prevent further outflow. To accomplish "Operation Twist," the Federal Reserve abandoned its "bills only" rule, and conducted its operations in all maturities of government securities.⁹

The Federal Reserve also raised the ceiling rates of interest that banks could pay on time and savings deposits. By altering Regulation Q the Federal Reserve hoped to attract foreign funds to time deposits. The higher rates stimulated a rapid increase in domestic time deposits at commercial banks.

The monetary policies undertaken in the early 1960's may be regarded as successful in stimulating real economic advancement while maintaining price stability. However, expansionary monetary policies did not dramatically reduce unemployment, nor solve the balance of payments problems. "Operation Twist" at best was only marginally successful in assuaging our balance of payment problems.

By the mid 1960's, the escalation of the Vietnam War and a surge in business investment expenditures were the dominant domestic forces affecting the economy. Consumer prices rose four percent in fifteen months after seven years of comparative price stability. By 1966, interest rates had risen to the historic highs of the 1920's. The Federal Reserve shifted from expansionary to restrictive economic policies. It raised Regulation Q and increased reserve requirements on certain types of time deposits. It tried to persuade member banks to curtail their lending voluntarily.

A few months later, conditions appeared to have changed; the Federal Reserve reversed itself and undertook deliberately expansive monetary policies. Concurrently, the international financial situation deteriorated. Throughout the 1960's, there had been frequent speculative attacks on weak currencies. Finally, in November, 1967, Britain devalued the pound 14.3 percent. Private demand for gold throughout the world continued to absorb all new gold offered for sale and drained the United States monetary gold stock. In 1968, seven major trading nations met and agreed to a new gold policy. Their actions established a "two tier" gold market: a private free market where the price of gold would fluctuate in response to supply and demand, and an official monetary gold market where governments would settle accounts in gold and reserve currencies at a fixed price of \$35 an ounce. Despite this, and the creation of a new international reserve asset known as special drawing rights (SDR), international financial disturbances continued.

⁹ Board of Governors of the Federal Reserve System, *Annual Report* (Washington, D.C.), various issues.

¹⁰ Edward J. Kane, "All for the Best: The Federal Reserve Board's 60th Annual Report," *American Economic Review*, vol. 64, no. 6 (December, 1974), pp. 837-839.

On August 15, 1971, the United States acted boldly and unilaterally. It would no longer redeem dollars in gold when they were presented by foreign governments for official settlement. It would not continue intervening in foreign exchange markets to maintain the pegged rates of exchange. It was abandoning the gold standard and withdrawing its support of the international monetary system that had been established at Bretton Woods in 1944.

Since 1971, the value of the dollar in terms of gold has been changed twice, effectively changing the exchange ratio of the dollar to other currencies and affecting the relative prices of goods and services that are traded. At present, exchange rates float in a managed way; the United States gold window remains closed.

The United States has begun to demonetize gold. It has ceased requiring gold backing for currency or member bank deposits. It once again permits citizens to hold gold, and recently has sold some of its gold at free market prices. In practice, the gold standard, domestically and internationally, is history.

Over the last decade, the Federal Reserve has taken more responsibility for altering short-run economic conditions and for promoting the general, long-run, macroeconomic objectives of full employment, price stability, widely shared real economic growth and equilibrium in the balance of payments. Achievement of the goals themselves appears to require contradictory monetary steps. Moreover, policies appropriate for the short run may often undermine achievement of the overriding economic objectives.

In response to, or in anticipation of, changing economic conditions, the Federal Reserve has developed new instruments of monetary control like Regulation Q; it has utilized old ones in new ways, like imposing marginal reserve requirements on member bank liabilities that formerly were exempt from control; it has relied on its standard control instruments, like the discount rate, much more frequently. In defining appropriate monetary strategy, the Federal Reserve, through its Open Market Committee, has moved away from a narrow concentration on money market conditions toward a strategy that is based on macroeconomic indicators and monetary aggregates.¹⁰

If monetary policy over the last decade were evaluated on the basis of the economic goals set forth in the Employment Act of 1946, for example, it would

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Helen B. O'Bannon's research interests focus on financial institutions, behavioral responses and the development and strategy of monetary and public policy. She is co-author, with David E. Bond and Ronald A. Shearer, of a recently published book, *Money and Banking: Theory, Policy and Institutions* (New York: Harper and Row, 1975).

"The way to end inflations, earlier experience teaches us, is to reduce the rate of monetary expansion and in addition, if possible, raise the rate of growth of real output."

Inflation in the United States

BY ANNA J. SCHWARTZ

Senior Research Staff, National Bureau of Economic Research

THE PHENOMENON of a sustained rise in the price level is known as inflation. Since 1949, for example, the most general price index for the United States economy has registered an increase in every year. Over the quarter century that has elapsed to the middle of 1975, prices as measured by this index have more than doubled, rising at the average rate of 3.3 percent per year. The average, we may note, is misleading, since it conceals the fact that the rate escalated from 2.2 percent per year before 1965 to 4.2 percent per year from 1965 to 1973 and to 9.8 percent since 1973.

The post-World War II inflation, however, is not a unique event in United States economic history. Inflationary episodes have punctuated our history from colonial times to the present. In addition to the current inflationary episode, Table 1 lists nine earlier

episodes during which sustained rises in the United States price level occurred. The table includes the periods covered, the aggregate change in the price level, and the average rate of price change per year. For the first six episodes, the monthly wholesale price index is the measure of price change. It is based on a sample of commodities in primary markets (that is, other than at the retail level) as a representation of the general price behavior of the economy. For each episode, the month of its start and the month of the price peak are designated. For the four most recent episodes, a general price index is available as the measure of price change. For this index, there are annual figures through 1946, and quarterly ones thereafter, so only years are designated for the start and price peaks of episodes until quarterly data exist.¹

Of the ten episodes listed in the table, half occurred during United States war periods, the remainder (including the Napoleonic War episode, in which the United States was not a belligerent) took place in peacetime. In general, wartime inflations have been briefer than peacetime inflations. It is noteworthy that the price peaks in the three United States wars in the eighteenth and nineteenth centuries coincided with or preceded the end of the wars; by contrast, the price peak was not reached until a year and a half after World War I, and not until three years after World War II ended. Apart from the inflation in the South during the Civil War (a special case to be discussed below), the magnitude of the aggregate change in the price level was greatest in the American Revolution. At its conclusion, the price level was 228 percent higher than at its start. The Civil War aggregate change for the North, 150 percent, was next in order of size, and the aggregate change of 58 percent in the War of 1812 was the lowest. For each of the two world wars, when prices almost doubled, the aggregate change was about the same. However, given the different duration of the wars, the ranking of the average rate of price rise per year differs from that of the aggregate change. Averaging 28 percent

¹ For the colonial episode, the coverage of the index is limited to 20 commodities bought and sold in Philadelphia. For the American Revolution episode, prices of only 11 to 16 commodities in New York City were available. For the remaining episodes for which the wholesale price index was the measure of inflation (apart from the Civil War inflation in the Confederacy), a 71-commodity index was available from 1791 to 1797; thereafter, the index included prices (quoted in many cities) of a varying number of commodities, ranging from 113 to 146. The price index for the South in the Civil War is based on 57 wholesale commodity price series quoted in local newspapers in four eastern cities of the Confederacy. For other details of the construction of the wholesale price indexes, see the following sources: Anne Bezanson, *Prices in Colonial Pennsylvania* (Philadelphia: University of Pennsylvania Press, 1935), p. 6; G. F. Warren, F. A. Pearson, and H. M. Stoker, *Wholesale Prices for 213 Years, 1720-1932*, Cornell University Agricultural Experiment Station, Memoir 142 (Ithaca, N.Y.: Cornell University, November, 1932), pp. 120, 205-6; Eugene M. Lerner, "Money, Prices, and Wages in the Confederacy, 1861-65," *Journal of Political Economy* (February, 1955), pp. 22-23.

The general price index is presented by the Department of Commerce among its measures of the gross national product. Gross national product is measured in two ways: in current prices and in constant (1958) prices. Dividing gross national product in current prices by gross national product in constant prices yields the general price index, which is designated as the implicit price deflator for gross national product.

Table 1. Ten Inflationary Episodes in U.S. History

Episode	Start of Period	Date of Price Peak	Duration of Episode in Years	Aggregate Rise in Price Level at Peak (in percent)	Average Rate of Price Rise per Year ^a
1. Colonial	May 1744	Dec. 1772	28.58	72	1.9
2. American Revolution	June 1775	June 1780	5.00	227	26.7
3. Napoleonic War	Mar. 1791	Sept. 1810	19.50	61	2.5
4. War of 1812	May 1812	Jan. 1815	2.66	58	18.8
5. Gold	June 1849	March 1857	7.75	44	4.8
6. Civil War—North	April 1861	Jan. 1865	3.75	150	27.7
—South	April 1861	April 1865	4.00	9020	209.0
7. Gold	1896	1914	18	42	2.0
8. World War I	1914	1920	6	94	11.7
9. World War II	1939	1948 III	9.25	87	7.0
10. Post-World War II	1949 III	1975 II	25.75	133	3.3

^a Annually compounded rates of price rise.

Sources: 1. Anne Bezanson et al., *Prices in Colonial Pennsylvania* (Philadelphia: University of Pennsylvania Press, 1935), p. 426.

2-6. George F. Warren and Frank A. Pearson, *Prices* (New York: John Wiley, 1933), pp. 11-12; Eugene M. Lerner, "Money, Prices, and Wages in the Confederacy, 1861-65," *Journal of Political Economy* (February, 1955), p. 24.

7-8. Unpublished worksheets underlying Simon Kuznets, *Capital in the American Economy* (Princeton: Princeton University Press for National Bureau of Economic Research, 1961).

9-10. *The National Income and Product Accounts of the United States, 1929-1965*, U.S. Department of Commerce/Office of Business Economics (Washington, D.C.: U.S.G.P.O., August, 1966), p. 162; *Business Statistics, 1973*, U.S. Department of Commerce/Bureau of Economic Analysis (Washington, D.C.: U.S.G.P.O., September, 1973), p. 203; *Survey of Current Business* (July, 1975), Advance Tables, Table 17.

per year, the Civil War rate of rise for the North was the highest, with the rise in the American Revolution of 27 percent per year a close second, followed by the 19 percent per year rise in the War of 1812. The World War I annual rate of rise of 11.7 percent may be compared with the 7.0 percent average price rise in World War II.

Of the five peacetime inflationary episodes, the longest in duration, twenty-eight and one-half years, was that of the colonial period, though if the 1949-1975 inflation is not reversed within the next two and one-half years, the post-World War II period will match, if not exceed, the earlier episode. Next in duration is the nineteen and one-half year Napoleonic War period, closely followed by the duration of the 1896-1914 episode. The shortest peacetime inflation lasted just under eight years, from 1849 to 1857. Compared with the wide disparity in the aggregate rise in the price level in wartime, much less variation characterizes the peacetime episodes, with the current inflation leading in magnitude. Similarly,

the range of the peacetime average annual rates of price rise is narrow, with the highest rate of 4.8 percent in the 1849-1857 inflation, and the lowest rate of 1.9 percent in the colonial period. The current average annual rate of rise of 3.3 percent is next to the highest peacetime rate experienced.²

WHY INFLATIONS OCCUR?

Two broad explanations of price inflation have coexisted for centuries. One line stresses the importance of such real factors as poor harvests, obstructions in supply conditions (including wartime blockades), the pressure of labor unions in pushing up wages, and the market power of business firms that administer prices. The particular real factors cited in the present inflationary episode include a worldwide boom, shortages of basic materials, crop failures, fuel shortages, and depreciation of the dollar in foreign exchange markets.³

The second explanation of price inflation stresses what happens to the quantity of money. The monetary explanation stresses a distinction between forces that cause relative prices to rise in specific markets and a monetary stimulus to aggregate demand. Relative price changes signal a change in either demand or supply conditions in specific markets but not a change in total demand for all goods and services. In this view, cost inflation and wage inflation are the effects, not causes, of inflation. The monetary explanation of a rise in the price level is that aggregate

² Substituting the wholesale price index for the implicit price deflator as the measure of price change since World War II would not alter this conclusion.

³ Proponents of the importance of real factors in explaining inflation favor price controls to curb it. Evidence over the centuries gives no support to the view that controls eliminate inflationary pressure. See Anna J. Schwartz, "Secular Price Change in Historical Perspective," *Journal of Money, Credit and Banking*, vol. 5, no. 1, part II, (February, 1973), pp. 243-69.

expenditures are increasing faster than the flow of goods and services, accordingly pulling up prices generally. Excess total demand, in turn, is produced by an increase in the quantity of money⁴ that outstrips the demand for money. The higher the level of output, the higher the quantity of money balances that people want to hold. Thus, increases in the quantity of money are inflationary only insofar as they exceed the growth in output.

In addition, once inflation takes hold, it tends to be reinforced by public recognition of its existence. Holders of money balances see that price increases reduce the real value of their holdings. If they come to expect a continuing rise in the price level, they may attempt to reduce the size of their money holdings relative to their incomes. In technical parlance, this is said to be a rise in the velocity of money. Rising

⁴ In one current definition of the quantity of money, it is a sum of coin and currency and demand deposits held by the public: in another, it includes also consumer-type time deposits at commercial banks. For the narrower definition, continuous estimates are available only since 1914; for the broader definition, used in this essay, continuous estimates are available since 1867, and intermittent ones for selected earlier dates.

⁵ See Milton Friedman, *Dollars and Deficits* (Englewood Cliffs, N.J.: Prentice-Hall, 1968), pp. 35-39.

⁶ In any system in which commercial banks operate with reserves that are a fraction of their deposits, the quantity of money outstanding is arithmetically attributable to three proximate determinants: high-powered money (H), the deposit-reserve ratio (D/R), and the deposit-currency ratio (D/C), as expressed in the following identity:

$$M = H \frac{D/R (1 + D/C)}{D/R + D/C}$$

The three proximate determinants reflect, respectively, the behavior of the monetary authorities—in the United States, the Treasury and the Federal Reserve System—the commercial banks, and the public. The monetary authorities provide high-powered money—the sum of bank reserves and currency—that the banks and public divide between themselves in light of the factors influencing the two sets of ratios. The deposit-reserve ratio is affected by legal reserve requirements, banks' expectations of currency movements into and out of their vaults, and interest rates. The deposit-currency ratio is affected by interest rates, income, and the public's preference for holding coin and currency.

In the absence of a central bank, bank reserves consist essentially of specie—gold and sometimes silver. Since 1914, the chief reserve asset of United States banks has been deposits of member banks on the books of the Federal Reserve banks. Since 1934, neither banks nor the public have legally held gold for payments purposes. Currency before 1914 also included coin and paper money issues of the Treasury and national bank notes; since 1914, it also includes Federal Reserve issues. National bank notes were retired in 1935.

Through control of the issue of high-powered money, the Federal Reserve can offset, not necessarily from week to week but certainly from quarter to quarter, any undesired change in the ratios made by the public and the banks. The Federal Reserve controls the issue of high-powered money by buying or selling government securities, or discounting commercial banks' promissory notes, or buying and selling foreign currencies. A purchase or a discount increases bank reserves; a sale decreases bank reserves.

For a further discussion of U.S. monetary policy, see the article by Helen O'Bannon in this issue.

prices thus tend to lead to a rise in velocity, which has the effect of raising prices still further. Spending in an effort to reduce money balances increases the demand for and prices of goods and real assets, like houses. However, there is a countervailing tendency over the long run for holdings of money balances to rise relative to income. At low levels of expected price change, the long-run tendency for velocity to fall may outweigh the velocity-increasing influence.

The ultimate question is the explanation of the rise in the quantity of money. To answer, it is useful to distinguish various sources of money creation. One source is an increase in the United States gold stock due to increased world gold production. Two peacetime inflations are associated with this source: the gold inflation of 1849-1857, as a result of the gold discoveries of 1848 in California and of 1851 in Australia; and the gold inflation of 1896-1914, as a result of an expansion in gold production after 1888 due to technological innovations in the purification of gold ore and, later, the opening up of rich gold deposits in the Transvaal fields in South Africa, and still later along the Yukon and Klondike Rivers in Alaska. A specie inflow associated with the United States international balance of payments has also been the basis for a peacetime inflation, as in the Napoleonic War period.

The government is an independent source of money creation. To finance its expenditures, it can obtain funds in three ways: (1) by creating money; (2) by taxation; (3) by borrowing at home and abroad at whatever interest rates are necessary. Whatever the purpose, for every dollar of money it creates, the government acquires control over one dollar of resources. If no price rise results, this is equivalent to the government's borrowing resources at a zero interest rate. If prices rise, this is equivalent to the government's taxing money balances to the extent of the rate of the price rise.⁵

Before 1781, there were no banks in this country. Hence a dollar created by the government before that year did not in turn lead to additional money creation by banks for which government-created money could serve as reserves. This was true of the colonial inflation and of the experience in the Revolution before the Bank of North America was established in 1781. Thereafter, in both peacetime and wartime inflations, the banks contributed to the growth in the quantity of money by creating deposits per dollar of money either created by the government or rising from the growth of their share of the gold stock. We did not have a central bank that became a potent factor in money creation until the Federal Reserve System was established in 1914.⁶ In World Wars I and II and in the current peacetime inflationary episode, the System's role in money creation has been dominant. The First Bank of the United States,

the nineteenth century precursor of a central bank, was in operation during the peacetime inflation of the Napoleonic War period. But, far from serving as an engine of inflation, the bank restrained the issues of the commercial banks.

EXPANSIONARY MONETARY GROWTH

1. The colonial money supply was a sum of mainly Spanish and Portuguese rather than English coins acquired through trade and shipping; bills of credit issued erratically by the different colonies to meet the needs of their treasuries; loan-bills they issued on real estate security; loan-bank paper money issues made on mortgage loans by the colonies with redemption determined by the rate of amortization of the mortgage indebtedness; and private bills of exchange that circulated as money. The size of the paper money issues varied from colony to colony over the period, with Pennsylvania moderate in the volume it emitted, and New England so lax that Parliament in 1761 prohibited further issue of bills of credit by the New England colonies, and in 1764 extended the prohibition to all the colonies. The inflation rate, accordingly, was higher in New England, as measured by the depreciation of its exchange rate with London, compared to that in Pennsylvania.⁷

2. Beginning in June, 1775, and continuing through November, 1779, the Continental Congress authorized 40 issues of bills of credit, totaling more than \$241 million, to be redeemed by the states. A small amount was redeemed at the beginning, so the total amount issued was never in circulation at one time. The bills of credit depreciated soon after they were first issued and, from 1779 on, they depreciated at an accelerated rate, the expression "not worth a continental" reflecting public disillusionment with an inflated currency. In addition to the continental currency, the individual states issued about \$210 million in paper money. The wartime inflation was a consequence of the increase in money and the disruption of supply of goods. One reason the price peak antedated the end of the war in 1781, when Cornwallis surrendered, was the cessation of the issue of bills of credit in 1779.⁸

3. United States neutrality during the Napoleonic War brought prosperity to the domestic export and reexport trade and to the carrying trade, despite interruptions during intervals of peace and as a result of the blockade tactics of the belligerents that led to

the Embargo Act in December, 1807. Increments to the United States specie stock that were a consequence served as the reserves of a growing banking industry that the states chartered. The limited estimates available of the quantity of coin, bank notes, and deposits in 1791 and 1810 suggest that the amount outstanding more than doubled. Output grew rapidly, however, so that an aggregate increase in the price level of 61 percent, shown in Table 1, is in line with the order of magnitude of the change in the quantity of money.⁹

4. The Treasury financed the War of 1812 partly by successive war loans negotiated under progressively disadvantageous terms (so that for a face value of over \$80 million, Treasury proceeds were only \$34 million), and by successive issues of Treasury notes, originally issued in interest-bearing \$100 denominations payable in one year, later in noninterest-bearing form in smaller denominations payable at no fixed date, an aggregate of \$36.7 million, although the maximum outstanding at any one time was much smaller. Taxes were not imposed until late in the war.

In the meantime, the expiration of the charter of the First Bank of the United States encouraged the formation of over 100 new banks between 1811 and 1815, more than doubling the number of banks in operation. Banks in the middle Atlantic and southern states were heavy purchasers of the Treasury war loans and notes, paying for them by authorizing the Treasury to draw drafts on them and issuing bank notes when the Treasury drew the drafts. New England, opposed to the war, did not participate in war loan purchases. At the same time, sales of goods by New England firms to the government were paid for by drafts on the banks in the middle Atlantic and southern states. Specie flowed to the New England banks from the banks outside, since the former were unwilling to maintain balances with the latter. In addition, New England banks returned notes of outside banks to the issuers for redemption in specie. When the British captured Washington in August, 1814, the banks outside New England seized the occasion to restrict the convertibility of deposits into currency and did not resume until February, 1817. With restriction, prices rose markedly higher in New York, Philadelphia and Baltimore than in Boston, a reflection of sectional differences in the rate of increase in the quantity of money. The price peak was reached in the fourth quarter of 1814 in Boston and in the first quarter of 1815 in the other cities. Since even on an annual basis monetary statistics are sketchy, we cannot unequivocally link the price peak with a peak in the rate of money creation. Scarce imported goods became available with the return of peace—news of the signing of the treaty ending the war reaching the United States early in February,

⁷ Davis R. Dewey, *Financial History of the United States* (New York: Longmans, Green and Co., 1920), pp. 18–30; Roger W. Weiss, "The Issue of Paper Money in the American Colonies, 1720–1774," *Journal of Economic History* vol. 30, no. 4, (December, 1970), pp. 770–84.

⁸ Dewey, *op. cit.*, pp. 34–48.

⁹ See Milton Friedman and Anna J. Schwartz, *Monetary Statistics of the United States* (New York: Columbia University Press for the National Bureau of Economic Research, 1970), pp. 216–9, 231.

1815—and contributed to the decline in the ratio of money to output.¹⁰

5. Reference has been made to the gold inflation of 1849–1857. Specie stock estimates for this period are not reliable on an annual basis, but there is little doubt of an increase on the order of a doubling of the stock over this period from the output of California mines. Estimates of the increase in the quantity of money indicate more than a doubling, as the number of banks increased and their note issues and deposits rose. Real output rose by less than a doubling. Again, an aggregate increase in the price level of 44 percent, shown in Table 1, is consistent with the increase in the quantity of money.¹¹

6. If we compare the inflation in the North and the South during the Civil War, it was nearly eightfold worse in the South. The Confederacy financed the war mainly by printing money. Less than 5 percent of its revenues came from tax collections. The corresponding figure for the North was about 21 percent. Less than 30 percent of Confederate revenues came from bond sales, about the same percentage as in the North. Accordingly, Confederate paper money issues were of greater importance, relative to the size of the war effort, compared to the situation in the North. Offsetting the difference in relative government money creation in the two sections was the behavior of the banks. Less money was created by banks in the South per dollar of money created by the Confederacy than by banks in the North per dollar of money created by the Union. Southern bankers, fearing heavy withdrawals in the event of incursions by Union troops, increased their reserve ratios. This influence was not present in the North. Since no central bank existed in either section to extend loans to banks that would enable them to accommodate borrowers more generously, this was a restraint on money creation by both sets of banks. Two other

factors contributed to the accelerated rise of the ratio of money to output in the South. Holders of Confederate notes in occupied Southern territory shipped them to areas still under Confederate control, and at the same time the base of real output contracted. Moreover, velocity rose markedly in the South, possibly not at all in the North, because in the South there was more of an inducement, given higher rates of price rise in the South, for holders of money balances to attempt to trade them for goods. In the North, once victory seemed attainable, future price declines could be anticipated, hence holding money, despite the existing inflation, might not be unattractive. As a result, compared to the North, prices increased manyfold more in the South than the increase in the quantity of money. The worst inflation in United States history accordingly occurred in the Confederacy.¹²

7. During the Civil War and until 1879, the United States was off the gold standard. This meant that the quantity of money was determined mainly by domestic considerations. In subsequent years until 1914, the United States was on the gold standard with fixed exchange rates. This meant that the quantity of money was determined mainly by external considerations. Through specie flows and capital movements, the international balance of payments affected the quantity of money, producing a level of United States prices consistent with fixed exchange rates. In the gold inflation from 1896 to 1914, external influences led to a quadrupling of the gold stock and of the quantity of money. Though the annual rate of increase in the quantity of money was 7.7 percent, prices rose at an annual rate of only 2 percent. A rise in real output at an annual rate of 3.6 percent and a decline in velocity of 2.0 percent yielded price behavior consistent with fixed exchange rates. In this period, the public's propensity over the long run to hold larger amounts of money relative to income outweighed the opposite influence of rising prices.¹³ It is worth noting, finally, that both the average rate of growth of the quantity of money and the rate of rise in prices were higher from 1896 to 1903 than in the remainder of the period, in contrast to the acceleration of rates of increase in money and prices in post-World War II inflation as the period progressed. Adherence to the gold standard in the earlier period

(Continued on page 194)

¹⁰ Dewey, *op. cit.*, pp. 132–8; Friedman and Schwartz, *op. cit.*, pp. 218–9; Walter B. Smith and Arthur H. Cole, *Fluctuations in American Business, 1790–1860* (Cambridge: Harvard University Press, 1935), pp. 27–29.

¹¹ Friedman and Schwartz, *op. cit.*, pp. 222–3.

¹² Milton Friedman, *The Optimum Quantity of Money and Other Essays* (Chicago: Aldine, 1969), pp. 157–70; Eugene M. Lerner, "Inflation in the Confederacy, 1861–65," in Milton Friedman (ed.), *Studies in the Quantity Theory of Money* (Chicago: University of Chicago Press, 1956), pp. 163–75.

¹³ Had velocity been unchanged or risen instead of declining, the quantity of money would have had to rise less rapidly or to decline, since it is unlikely that output would have risen at a more rapid rate than it actually did. The less rapid rise or the decline in the quantity of money would be produced by deficits in the balance of payments and gold outflows, actual or threatened. The balance of payments determined the size of the adjustment of prices but it did not determine the behavior of velocity and real output and hence the quantity of money. See Milton Friedman and Anna J. Schwartz, *A Monetary History of the United States, 1867–1960* (Princeton: Princeton University Press for the National Bureau of Economic Research, 1963), pp. 101, 119.

Anna J. Schwartz for many years has been collaborating with Milton Friedman on studies of the effects of changes in the rate of growth of the money stock on both cyclical and long-term changes in income, employment, output, prices and interest rates. She is also co-author, with A. D. Gayer and W. W. Rostow, of *The Growth and Fluctuation of the British Economy, 1790–1850*, 2 vols. (Oxford: Clarendon Press, 1953; 2d ed., Sussex: Harvester Press, 1975 forthcoming).

"... a problem that is affecting virtually every corporation and thus every American is largely overlooked in the mass media. This is the problem of capital formation—collecting the money needed to invest in new plants and new equipment to create the 11 million new jobs that President Gerald Ford says the nation must have by 1980."

The Role of the American Corporation

BY STANFORD CALDERWOOD

Visiting Professor of Economics, Wellesley College

THE UNITED STATES is a nation of consumers. In 1974, Americans bought 31.8 million major appliances, or one to about every two households. The total included 4.5 million window air conditioners, 5.9 million refrigerators, and 4.9 million washers.

Our cars needed 44.4 million replacement batteries and 145.4 million replacement tires. We flew 162.9 billion passenger miles, making our reservations over some of the 127.9 million telephones we keep busy every day. That's 4.6 million more phones than we had in 1973. We smoked 576 billion cigarettes, drank 137 million gallons of whiskey, and added 32.1 million men's shirts to our wardrobes.

Behind these everyday products, a vast industrial complex turned out 109 million tons of steel, not only for our air conditioners and cars, but for the buildings where we work and the bridges we cross getting there. On average last year, we drilled 35 new oil wells every day, some costing \$1 million or more, and we still had to increase our imports to provide us with 6 billion barrels of oil. It took another 601 million tons of coal, 16,013 trillion BTU's of gas, and 1,700,-769 million kilowatt hours of electricity to round out our demand for energy.

These are appetites that cannot be satisfied by the street people who have retreated to a Vermont commune to work in some cottage industry. Or, for that matter, by the fondly remembered family business where every employee knew the boss and got a free turkey at Christmas.

The mushrooming of the industrial revolution in this century required planning, capital, organization, technology, and distribution beyond the capacity of any group of individual entrepreneurs or any group of small firms. The only systems that have been able to meet the demands of modern industrial economics are the socialist commissariat, as it has developed in

the Soviet Union, and the modern corporation, most highly developed in the United States.

And while there are nearly 10 million small, privately owned businesses in the United States, the corporation plays the dominant role in the nation's economy. The corporation has its roots in medieval history but was not widely established until the mid-nineteenth century. It is most highly developed in the United States and has been the major force in this nation's economy, which produces about 30 percent of the world's gross national product (GNP) by and for about 6 percent of the world's population.

Today, more than half of all Americans work for a corporation, and virtually all Americans are highly dependent on products or services produced by corporations. The corporate sector of the GNP has remained stable for 25 years, but there is high concentration of sales, assets, and profits in the very largest corporations.

In the decade ahead, the corporate sector, and thus the entire economy, are facing the most serious test of their history. Unless corporations can raise about three times as much capital for new plant and equipment as they have in the recent past, the growth of productivity will slow even more, and everyone's standard of living will erode.

At the end of 1971 (the last year for which complete Internal Revenue Service [IRS] figures are available), there were 12.4 million separate businesses in the United States. That meant that in one out of approximately every five households lived a person who commanded a business enterprise. These "chief executives" ranged from an electrician in Davenport, Iowa, who had no employees and operated out of his garage, to the president of General Motors, with more than 700,000 employees and so many manufacturing plants and branch offices he could never expect to visit them all.

Table 1: Proprietorships, Partnerships and Corporations
(Numbers in thousands, money figures in billions)

	1945		1971		1945-1971
	Number or \$'s	% Share Total	Number or \$'s	% Share Total	Change In % Share
Proprietorships*					
Number	5,689	84.4%	9,745	78.4%	- 7.2%
Receipts	\$ 79	20.7	\$255	11.2	- 43.9
Profits	\$ 12	30.0	\$ 41	31.5	+ 5.0
Partnerships					
Number	627	9.3%	959	7.7%	- 17.3%
Receipts	\$ 47	12.3	\$100	4.4	- 64.3
Profits	\$ 7	17.5	\$ 9	6.9	- 61.6
Corporations					
Number	421	6.3%	1,733	13.9%	+120.6%
Receipts	\$255	66.8	\$1,906	84.3	+ 26.1
Profits	\$ 21	52.5	\$ 80	61.5	+ 17.1
Total All Businesses					
Number	6,737	100.0%	12,437	100.0%	—
Receipts	\$381	100.0	\$2,261	100.0	—
Profits	\$ 40	100.0	\$130	100.0	—

* Individually owned businesses and farms. In 1970 there were 2,730,250 farms with sales of \$2,500 or more.

Source: U.S. Internal Revenue Service, *Statistics of Income, Business Income Tax Returns, Annual* (Washington, D.C.: U.S. Government Printing Office).

Table 2: Summary of Fortune's Rankings of Largest Non-Financial Corporations

	Sales (000,000)	Assets (000,000)	Profits (000,000)	Share- holders' Equity (000,000)	Profits* as % of:		Employees
					Sales	Equity	
500 largest industrials	\$ 833,956	\$628,636	\$43,619	\$309,503	4.3%	13.6%	15,255,946
2nd 500 largest industrials	80,948	59,829	3,742	29,469	4.0	12.3	1,993,976
50 largest retailers	111,587	43,389	1,473	20,017	1.3	7.3	2,706,564
50 largest transportation companies	35,810	50,640	1,207	18,451	3.4	6.5	919,199
50 largest utilities	71,938	214,590	7,905	80,323	—	9.8	1,668,405
Total 1,250 corporations	\$1,134,239	\$997,084	\$57,946	\$457,763			22,544,090

* Median for industrials; average for retailers, transportation companies and utilities.

Source: *Fortune Magazine*, May, June and July, 1975.

And although corporations accounted for only 13.9 percent of the total business units, the corporate sector had 84.2 percent of the receipts and 61.5 percent of the profits (See Table 1).

Caution should be used in drawing any inference from Table 1. Changes in the tax law have made it attractive for many proprietors to incorporate. The very same business that a decade ago might have been listed as a proprietorship is now a corporation with a single shareholder. Some 865,000 corporations, about half of the total, have receipts under \$100,000, a category where most proprietorships fall. In fact, only about 10 percent of the corporations have receipts over \$1 million.

FOCUS ON THE CORPORATE SECTOR

Examining the corporate sector, we find even more dramatic concentration in the largest 1,250 corporations—less than one percent of the total corporate

units and only one-tenth of one percent of the total business units.

One problem that arises in working with any of several available lists of largest corporations is the definition of the word "largest." Some lists are ranked by sales, others by profits, by assets, or by stock market value. Thus, for 1974, *Fortune* ranked Raytheon as the 100th largest industrial corporation by sales. *Forbes*, which does not segregate its lists by sectors and includes financial corporations, ranked Raytheon as the 141st largest corporation by sales, 260th by profits, 469th by assets, and 244th by stock market value.

In this article, the *Fortune* listings have been selected because they segregate the non-financial corporations; thus comparison with government statistics is more feasible. Each year, *Fortune* divides the non-financial corporations into four groups—industrials, retailers, transportation companies and utilities. The

Table 3: Gross National Product by Sector
(billions of dollars)

	1950	% Share Total 1950	1974	% Share Total 1974	% Change 1950-1974
Gross National Product	\$284.8	100.0%	\$1,396.7	100.0%	+390.4%
Business	\$256.3	90.0%	\$1,177.9	84.3%	+336.1%
Non-financial corporations	151.7	53.3	731.8	52.4	+382.3
Other non-farm business	84.6	29.7	392.3	28.0	+212.8
Farm business	20.0	7.0	53.8	3.9	+169.0
Households/Institutions	\$ 6.4	2.2%	\$ 47.0	3.4%	+634.4%
General Government*	\$ 20.9	7.4%	\$160.8	11.5%	+669.4%
Rest of World	\$ 1.2	0.4%	\$ 11.1	0.8%	+825.0%

* Compensation of general government employees. Compensation of employees in government enterprises is included in other non-farm business.

Source: Economic Report of the President, February 1975.

lists do not include some large privately held corporations which would qualify in size if precise figures were available.

The 1,250 corporations in Table 2 had sales of \$1.1 trillion, profits of \$57.9 billion, and 22.5 million employees, dominating the corporate sector in sales, profits, and employees. *Fortune* estimates that the 1,000 largest industrials represented 72.6 percent of the sales of all United States industrials. Profits of the 1,250 largest corporations accounted for 68.1 percent of all after-tax corporate profits of \$85 billion, and their employees represented about 54.3 percent of the total work force employed in these four sectors.

The one sector that large corporations do not dominate is retailing. The Commerce Department reported 2.2 million retail outlets at the end of 1974, and obviously many of them were proprietorships—the so-called “mom and pop shops,” ranging from lunchrooms to variety stores to gasoline stations. Thus, it is not surprising that the largest retailers had only 20.7 percent of the sales and 15.6 percent of the employees for this particular business sector.

It is interesting to note (in Table 2) the concentration even in this greatly reduced list. The top 500 industrials have ten times the sales of the next 500 industrials and about 11.6 times the profits. This concentration of power, this “bigness,” has drawn sharp criticism for decades. Early in this century, it was John D. Rockefeller's Standard Oil Company that was under fire. The Supreme Court split that “octopus” into 11 separate companies. Today, each of those companies is larger than the original Standard Oil Company—in capital, in employees, in production. Yet, only four of them rank among the major oil companies today.

One early opponent of large corporations was Louis D. Brandeis, famous as a reformer-lawyer and later as a justice of the Supreme Court. He feared that if corporations were allowed unrestrained expansion, they could not be prevented from oversetting the principles of democracy. History has seen cor-

porations grow 20 times larger than Brandeis thought possible for efficient organization or effective restraint. Yet the federal government can successfully, and easily, ask the nation's largest industrial corporation, General Motors, to recall hundreds of thousands of its cars.

THE CORPORATE SHARE OF THE GNP

Corporate critics who keep pointing to how large corporations are becoming seem to forget that everything is getting larger—governments, universities, hospitals. In 1974, non-financial corporations had about a 52.4 percent share of the GNP—a percentage that has been virtually unchanged in 25 years.

In studying Table 3, we see that the total business sector has shrunk from a 90.0 percent to an 84.3 percent share of the GNP, with the reductions coming both in the non-corporate business and farming. But the shift has not been to the corporations, it has been to the government. General government has nearly doubled its share of the GNP over the last 25 years, all at the expense of the business sector.

Each American is probably more closely tied to and more dependent on the large corporations than he realizes. For just a hint of the role corporations play in the American life style, consider the first half hour of an average Americans waking day.

He could have been awakened by a digital clock radio made by General Electric—1975 sales of \$13.4 billion, eighth in size on *Fortune's* list of the largest United States industrial corporations. The network news that woke him could have come from the Columbia Broadcasting System (CBS) (\$1.7 billion in sales, 111th in rank) delivered to his local radio station over circuits leased from the American Telephone and Telegraph Company (AT&T) (\$26.1 billion in sales and first on *Fortune's* list of 50 largest utilities). Incidentally, the local radio station could be owned by General Tire & Rubber (\$1.7 billion in sales, 115th in rank).

The electric blanket he switched off before he got

Table 4: Public Attitudes Toward Corporate Profits

"Just as a rough guess, what percent profit on each dollar of sales do you think the average manufacturer makes, after taxes?"

	1945	1951	1962	1965	1969	1970	1975
Public Estimate	18	21	20	21	27	28	33
Actual	4.2	5.1	4.5	5.6	4.8	4.0	5.2

Source: Opinion Research Corporation, Princeton, N.J. 1974 manufacturing profits after taxes estimated by First National City Bank.

out of bed may have come from Sears Roebuck (\$13.1 billion in sales), but it was made for Sears' private label by some corporation whose name he would not recognize. He may have shaved with a Trac II razor from Gillette (\$1.2 billion in sales, 160th in rank) and he may have brushed his teeth with Crest from Procter & Gamble (\$4.9 billion, 28th in rank).

Breakfast might have consisted of Birds Eye frozen orange juice from General Foods (\$2.9 billion, 58th), toast made with Pepperidge Farm bread from Campbell Soup Company (\$1.5 billion, 136th), and Armour Star bacon from the Greyhound Corporation (\$3.4 billion, 45th).

These are all well-known brand names, but a good many less familiar corporate names play an important role in getting Americans started in the morning. The electricity that runs the toaster may have started as coal in a mine owned by AMAX (\$1.1 billion, 167th) where equipment made by Bucyrus-Erie (\$251 million, 529th) was used to get it out of the ground. At the local utility, the coal might have been converted to electricity in the equipment made by Babcock & Wilcox (\$1.3 billion, 156th), monitored by instruments from Perkin-Elmer (\$272 million, 516th) and with pollution controls by Combustion Engineering (\$1.4 billion, 140th).

This list barely scratches the surface of the thousands of products and services Americans use in everyday living; and almost without exception they are purchased for fewer minutes or hours of work than would be required in any other economy in the world. Yet the corporation, which has led Americans into the highest standard of living in the world, is in serious trouble.

The headlines may focus on International Telephone and Telegraph interference in the affairs of Chile or on the 22 corporate officers convicted of illegal political contributions in the last presidential election. These are matters that involve only a few corporations. A much more serious problem, a problem that is affecting virtually every corporation and thus every American, is largely overlooked in the mass media. This is the problem of capital formation—collecting the money needed to invest in new

plants and new equipment to create the 11 million new jobs that President Gerald Ford says the nation must have by 1980.

PROFITS

The problem of the "capital gap" starts primarily with the level of profits. Profits, once described in *Forbes* as that "seven-letter dirty word," is one of the most misunderstood aspects of the corporate sector. Polls taken by the Opinion Research Corporation of Princeton, New Jersey, show that the public thinks the average manufacturer makes 33 cents profit after taxes out of every dollar of sales. This median estimate is about 500 percent more than the actual profit of 5.2 cents. In the last 25 years, corporate efforts to educate the public have failed. In 1945, the estimate was only 18 cents.

Much of the worsening suspicion of profits may stem from the mass media, which deal in absolute numbers—usually multimillions of dollars—without describing these profits as a percentage of either sales or invested capital. The recent jump in the public estimate may well stem from the impact of inventory profits, which grew at a rapid rate in the years 1973 and 1974.

In 1974, for example, profits of non-financial corporations before taxes were \$109.4 billion, an all-time high. But the Commerce Department estimates that \$35.1 billion of the total represented temporary or "phantom" profits made from inflated inventories purchased during earlier periods when prices were much lower. In the last 10 years, for these corporations, profits have been up 66.5 percent before inventory adjustment, and only 16 percent after inventory adjustment. In the same 10 years, the national income was up 102.4 percent and compensation to employees was up 117.3 percent.

The percentage share of the national income going to profits of non-financial corporations after inventory adjustment has fallen steadily from 13.8 percent in 1950 to 6.5 percent in 1974 (see Table 5). At the same time, the percentage share of the national income going to employees' compensation has gone up from 64.1 percent to 74.9 percent.

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Stanford Calderwood, a former executive vice president of Polaroid Corporation, has spent most of his working career in the corporate sector except for about a year in public television. During that stint, he found the first year's programs for "Masterpiece Theater," and then convinced Mobil Oil Corporation to give nearly \$1 million needed for initial underwriting. He currently is a director and a major shareholder of an investment advisory firm that manages about \$1 billion in assets for university endowments and corporate pension funds.

"The federal government's role in the economy has increased over the last 50 years, although not to the extent feared by some."

The Federal Role in the Economy

BY JAMES N. WETZEL

Assistant Professor of Economics, Virginia Commonwealth University

THE GROWTH of the role of the federal government in our economy can be considered from several perspectives. The growing list of government regulations, the increasing amount of federal taxes, spending, borrowing and employment all seem to indicate that the role of government in the economy has been "expanding" rapidly. This appears to be especially true as a result of government action to combat the Great Depression, to fight World War II and two wars in Asia, and to carry our social programs.

The nation was born with a debt of some \$77 million. As part of the political give and take of the nationhood process it was agreed that the federal government would take over those state debts incurred as a result of the Revolutionary War. Since the Southern states had relatively little debt compared to the Northern states, part of the compromise was the location of the nation's capital in the southern part of the country. During the years that George Washington and John Adams were President, the federal debt increased. Under Thomas Jefferson, expenditures were cut back, and the debt was reduced. However, the War of 1812 involved a drastic increase in federal expenditures. Since taxes were not increased to pay for that war, some 85 percent of the war was financed by borrowing, thus increasing the federal debt to over \$100 million.

After the War of 1812, the role of the federal government declined, and state and local governments provided more general goods and services. As a result, the federal debt was reduced; by the 1830's the debt had been paid and substantial surpluses were being obtained. Normally, such surpluses might be reduced either by reducing taxes or by increasing government spending. For reasons of political economy, neither of these approaches was followed. Since most government receipts came from customs receipts, domestic producers enjoyed a price advantage over imported goods that they were unwilling to see reduced by tariff reductions. Government spending was not increased in the administration of Andrew Jackson, which limited the role of the federal government in

domestic economic matters. As a result, the federal surplus was reduced by a revenue-sharing mechanism that distributed the almost \$40-million surplus to the states on the basis of their representation in Congress. This program lasted only about a year; the surplus was soon converted into a deficit partially related to a financial panic and partially to a decrease in federal receipts because of a decrease in revenue from land sales following President Jackson's insistence on specie payments. This loss of revenue was important because during the early history of the United States federal revenues were confined to fairly narrow sources: excise taxes, import duties, and revenue raised from land sales. Since the mid-1830's, the federal government has been in debt on a permanent basis.

The next major impact on expenditures, taxes and borrowing was the Civil War. During the five years from 1860 to 1865, federal expenditures increased 20-fold. During the highest level of wartime expenditures, about one-fifth of the gross national product was going into government expenditures. This compares to a ratio of about one-sixtieth before the war. Such an enormous increase in spending could not be matched, on political and economic grounds, by increased taxes. Thus, something over 80 percent of the Civil War was financed by borrowing. As a result, the federal debt, which had been measured in millions, jumped to \$2.7 billion by the end of the war. During this time also (in 1862), a federal income tax very similar to the current federal income tax was enacted. This tax was later declared unconstitutional, and was revived only after the ratification of the Sixteenth Amendment in 1913.

After the Civil War, federal expenditures and revenues declined, but not to their prewar levels. During the last third of the 1800's, government receipts usually exceeded expenditures. As a result, the debt was reduced to about \$1 billion by the end of the century. This figure stayed relatively constant until World War I; receipts and expenditures were roughly equal through the first decade of the twentieth century.

Like most wars, World War I created a crisis not only in terms of defense, but also in terms of public financing. The impact both in absolute and in relative terms of this war was far greater than that of the Civil War. This was due in part to the fact that the war was fought on foreign soil and required a vast logistical support structure. In addition, this was the first major war in which the United States used expensive industrial equipment and technology. During World War I, expenditures increased 25-fold. Again, as in earlier wars, it was neither possible nor desirable to pay for this expense by tax increases in such a short time span. However, the federal income tax, which had recently gone into effect, did give the government more tax-raising power than it had in earlier wars. Taxes paid for about 30 percent of the cost of World War I, a figure almost double the amount paid out of taxes during the Civil War and the War of 1812. Despite this increase in taxes, the federal debt jumped from \$1 billion to over \$25 billion. World War I also saw the imposition of nonmarket-based directives to allocate resources and production in the economy. In 1917, a War Industries Board was created to supplant the workings of the marketplace in order to insure sufficient war products from the industrial sector. Many products were standardized; production of some 30,000 items was regulated over the course of the war; and the government took over the control, although not the ownership, of the railroads. After the war, these regulations were eliminated. However, the fact that the government could take an active part in controlling and planning the economy in the direction of national needs was a lesson that was to be remembered some 20 years later.

After World War I, both taxes and government spending were reduced. As had happened after previous wars, revenue exceeded spending, and the surplus was used to retire some of the federal debt. Government spending, however, did not fall to its prewar level, but remained some 50 to 70 percent higher as a percentage of GNP than before the war. Despite this, the debt was reduced by about one-third, from \$25 billion to less than \$16 billion, during the prosperous decade of the 1920's.

The first 150 years of the nation saw vast increases in government spending and taxes. The role of the government in the economy was largely guided by the laissez-faire principles of Adam Smith and the classical school of economics. The federal government spent to strengthen the military, to maintain an internal system of justice and law, and to finance public construction. However, society's needs were still simple; and public goods and services were provided by local

government. The original federal debt of \$77 million grew to a high of \$25 billion in World War I and was reduced to some \$16 billion by 1929. A dominant pattern of these 150 years was the rise of government spending, taxes, and debt during war years. After each war, all three measures declined, but usually remained at a much higher dollar level than in the prewar years.

THE PUBLIC SECTOR AFTER 1929

Table 1* provides an overview of the growth of federal government receipts and expenditures since 1930. During this time, the government began to play an expanded role in the economy in a way that is usually associated with Keynes. Out of the Great Depression came one of the most significant books of our times, *The General Theory of Employment, Interest, and Money*, first published in 1936.¹ Although many New Deal programs are described as Keynesian responses to the Great Depression, such a statement is misleading. The administration of Franklin D. Roosevelt began under fiscal orthodoxy, with a balanced budget commitment. Many New Deal proposals were remarkably similar to the programs used to guide the economy during World War I, and were often staffed and administered by the same people. The War Industries Board mentioned earlier set the pattern for Roosevelt's National Recovery Administration. But government policy did move in the policy direction proposed by Keynes with large increases in government spending and much smaller increases in taxes over the decade.

In order to combat the Depression and the high levels of unemployment, the federal government increased spending from \$3.3 billion to \$9.5 billion during the decade of the 1930's. Although tax receipts increased in this time period, the increase was much less, from \$4.1 billion to only \$6.4 billion. By the end of the decade, additions to the federal debt were running at \$3 billion a year, a figure that surpassed any previous peacetime debt increase and had been exceeded only by the World War I years. The New Deal and other programs initiated by Roosevelt were designed to counter unemployment either by stimulating the private economy or by direct government employment. By the end of the 1930's, the total federal debt had jumped to some \$45 billion, almost three times the level (\$16 billion) to which it had fallen in the 1920's.

However, the increase in federal spending, federal taxes and the federal debt in the 1930's was overshadowed during the first half of the 1940's, once again, to fight a war. As a side effect of this tremendous growth in federal spending, the Great Depression and its awesome rates of unemployment passed into history. During World War II, spending increased from about \$9 billion to over \$90 billion per year.

* See inside back cover.

¹ John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (New York: Harcourt Brace Jovanovich, 1965).

Although this 10-fold increase in spending was less than the 20-fold increases of earlier wars in absolute terms, it was much greater, because the base from which it was calculated was so much higher. As in earlier war periods, the increase in tax receipts was not able to pay for the war. As a result, in 1940–1945, the federal debt increased from \$45 billion in 1940 to over \$252 billion in 1945, as the nation borrowed to pay for the estimated \$300-billion cost of the war.

The last half of the 1940's saw a decrease in government activity. The need for massive government expenditures for defense was reduced when the war ended. At the same time, a large pent-up private demand for goods and services that had not been satisfied during the war fueled the economy and prevented a serious recession or depression. As a result, government spending declined drastically. By 1950, spending had dropped to about half of the 1945 level, and taxes had also declined somewhat. In three of the last four years of the 1940's, the federal budget actually ran a small surplus. A major political economic event of this postwar period was the Employment Act of 1946, which stated the belief that federal policy should be designed to maintain full employment. The act provided a base for government action to combat unemployment in the 1960's.

The 1950's saw a doubling of government spending and a large increase in tax receipts. During this time, one hot war (in Korea) and the cold war served to stimulate significant outlays in federal expenditures. Although the theoretical work of Keynes gained widespread academic acknowledgment, federal spending and tax decisions were not based on that policy. Tax policy, spending policy and monetary policy were not operating to maintain the growth of the economy, witness the slow growth of the economy, the growing unemployment rates and the subsequent downturn in the economy, especially during the recession of 1958. The 1959 Joint Economic Committee reports on *Employment Growth and Price Levels*² suggested that the problems were due to a very low rate of growth of the money supply (less than two percent from 1953 to 1959), little fiscal stimulus, and the impact of the growth and fluctuations of the large peacetime defense budgets. During this time, the size of the federal debt remained stable, except for the increase in expenditures for the Korean War and the decrease in revenue in the 1958 recession.

The first half of the 1960's was the high point for macroeconomic policy. The disaster of the 1965–1975 period did not prove macroeconomics wrong. Rather, it proved that, when “bad” tax, expenditure, and monetary decisions are made on political ground without regard to their economic results, the economic

impact may also be “bad.” In the early 1960's, the nation was recovering from the 1958 recession. As the recovery stalled, the Council of Economic Advisors suggested a tax cut to stimulate the economy further. This was finally enacted. By mid-1965, the economy was growing at a rate above that of the 1950's; prices were fairly stable, and unemployment was about 4.5 percent. Although both federal expenditures and taxes increased to between \$115 billion and \$120 billion, this increase was relatively smaller than the increases of the previous five years. The federal debt dropped from about one-half of GNP to about one-third of GNP and declined to the level of the early 1960's in dollar terms.

The last half of the 1960's found federal spending and taxes increasing as the nation found itself involved in another war. Unfortunately, spending and tax policies were not planned in accordance with macroeconomic theory, and federal policies destabilized rather than controlled the economy. The war in Southeast Asia pushed total demand up, but tax policy was not designed to slow the economy down. By the time a tax policy was enacted, it was too late and caused a downswing in the economy. At the same time, monetary policy reacted to destabilize the economy further by alternately growing at fairly high rates or barely growing at all. At the same time, the government embarked on ambitious social programs that were very costly in the 1970's. By the end of the 1960's, both federal spending and taxes were approaching the \$200 billion mark, up from \$120 billion in 1965. The federal debt also increased. But since the economy was growing faster than the debt, the debt fell from 33 percent to 30 percent of the GNP.

There was no consistent, coordinated spending, tax, and monetary policy in the 1970's until (perhaps) 1974. The administration did make one attempt at wage and price controls whose effects are still being debated. Federal expenditures increased as the cost of the social programs established in the 1960's increased sharply. At the same time, the American withdrawal from Southeast Asia did not result in a decrease in defense spending; inflation, fueled in part by an expansionary monetary policy, aided the rise in money expenditures in the defense budget. Government spending has increased drastically from its 1970 level. In 1975 and 1976 and probably beyond, large budget deficits are projected. The federal government, much as it did a decade earlier, plans to use tax policy to halt the recession and unemployment that became severe during 1974 and the first half of 1975. However, recovery will probably be slow. There will be substantial budget deficits for several years, and the rate of unemployment will decline only slowly during the last half of the 1970's. Substantial budget deficits will continue even without further tax cuts. As the federal government has moved into the social wel-

² Washington, D.C.: U.S. Government Printing Office, 1959.

fare program area and as defense equipment has become increasingly expensive, the administration finds itself committed to automatic increases in expenditures unless it takes drastic action either to control defense spending or to control social welfare expenditures. At the same time, the high level of unemployment may encourage stimulative tax cuts that would slow the growth rate of tax receipts. Thus, the divergent growth rates of high spending and low taxes will probably mean the highest peacetime deficits in our history in the last half of the 1970's.

The federal debt is large and will continue to grow. Yet, as Table 2* shows, the federal debt has been decreasing both as a percentage of GNP and as a percentage of private debt. Most of the federal debt has occurred as a result of war and defense spending, and, in peacetime, the additions to the debt have often served as a stimulus to the economy. In this regard, the cost of the debt may be far lower than the cost, in terms of high unemployment and a stagnant economy, of not running a deficit.

FEDERAL EMPLOYMENT

One other method used to evaluate the growth of the government in our economy is to consider the growth in size of the federal labor force. The increase in the size of the federal bureaucracy has been substantial in absolute terms. However, since World War II, the armed forces have absorbed more of the labor force than the bureaucracy absorbed until the mid-1970's. A more useful measure of the federal government's absorption of the labor force is to consider government employment as a percentage of the total labor force. Table 3* shows that the greatest jump in the federal labor force occurred during World War II. Once the war was over, the percentage dropped from well over four percent to three percent, a figure that has stayed fairly consistent over the last 25 years.

TAXATION AND TAX REFORM

Any study of United States tax policy that touches the issue of who actually pays taxes leads to the conclusion that the tax rates published in tax tables are "fictional" and that most non-low income groups legally avoid a large part of their possible tax burden. Legal ways to avoid paying taxes (by finding loopholes) have led to many proposals for tax reform. Unfortunately, tax loopholes are heavily defended by those who benefit from them. Thus, the oil industry has a very strong incentive to defend the oil depletion allowance. A corporate tax loophole like the oil depletion may cost the federal treasury billions of dollars, which then must be raised from other tax sources or by borrowing. A secondary effect of a

loophole may be to keep the price of the product in question artificially low, thus encouraging greater consumption of the product. While this may not have appeared to be a problem in the 1950's, hindsight suggests that low oil prices and the high consumption of "cheap" (relative to other normally taxed products) oil products contributed to our reliance on imported oil. Thus, the effect of corporate tax loopholes goes beyond higher profits to those corporations receiving the tax breaks.

Of more immediate concern to many is the personal income tax. Graph 1* shows the rates as they appear in the tax tables as contrasted to several estimates of the actual tax rates. Federal income tax rates have been going down since World War II (except for the Korean War and the surtax of 1968). For example, the effective tax rate in the \$15,000-\$20,000 class dropped from about 25 percent to about 14 percent in the two decades since World War II.

The chance of a major tax reform appears to be relatively small. Since 1960, there have been only two reforms of any significance. In 1964, the dividend credit and state and local tax reductions other than income, property, gasoline, and sales tax were eliminated. There was also some reduction in the oil depletion allowance in the mid-1970's.

Groups or individuals advocating tax reform usually proceed in one of three directions. First, they try to plug special loopholes, like the oil depletion allowances. A second approach is to include income not currently subject to tax as part of the income tax base. Attempts have been made to convert the tax-free interest earned on state and local bonds into a taxable income base. So far, such attempts have failed. The third major effort has been to relieve the very regressive burden of the social security payroll tax that has increased over the years. The author has become convinced that the only way to reform the tax system is to abandon the present tax and welfare system and replace it with a negative income tax scheme plus a somewhat progressive personal income tax on all income regardless of source and a very progressive estate- and gift-tax mechanism.

SUMMARY

The federal government's role in the economy has increased over the last 50 years, although not to the extent feared by some. Most of the increase in government activity—spending, taxes, employment, and the debt—can be traced to various wars and the prolonged cold war. Only during the early 1960's and
(Continued on page 196)

James D. Wetzel is a specialist in teaching principles of economics. His research interest is in the area of public policy, especially the environment, congestion, and outdoor recreation.

* See inside back cover.

"State and local governments face increased fiscal pressures because of rapidly escalating expenditures. Their revenue-taking capacity has not expanded accordingly."

Financing State and Local Governments: Crisis of the 1970's

BY KARL E. CASE II

Instructor in Economics, Harvard University

and

VIRGINIA ROGERS

Research Associate, Federal Reserve Bank of Boston

THE FINANCING NEEDS of state and local governments have grown at an alarmingly rapid rate in recent years. State and local government purchases of goods and services amounted to \$205 billion in the first quarter of 1975, totaling more than 14.5 percent of the total gross national product (GNP).¹ This reflects an 11.9 percent average annual increase since 1970, at a time when GNP was growing more slowly at the rate of 8.2 percent yearly. Many state and local governments are currently experiencing fiscal crises, because their existing revenue systems are producing inadequate funds to meet growing financing needs. In the third quarter of 1973, state and local governments as a whole shifted from budgetary surplus to deficit and by the first quarter of 1975 their aggregate deficit totaled \$11.6 billion.²

The current high rates of inflation, combined with high levels of unemployment, have had severe implications for the budgets of state and local governments. Recession causes a worsening of the budget position by slowing the growth of tax revenues while increasing the demand for certain state and local services. Inflation also increases the expenditure requirements

of state and local governments by forcing them to pay significantly higher prices for goods and services and by increasing the cost of borrowing money. Inflation does, however, cause an increase in revenues from sources by increasing incomes and raising sales prices.

In its report to Congress, the Joint Economic Committee predicted that "the combination of inflation-affected expenditures and recession-induced revenue shortfalls will make it very difficult for many state and local governments to make it through the upcoming year without tax increases, employee layoffs, and cuts in levels of service."³ States like Connecticut, Massachusetts and New Jersey were forced to enact substantial tax increases to help finance their state operations. Others, including Illinois and Ohio, were forced to cut back already appropriated expenditures, and calls for austerity budgets and decreased services were heard in many other states.⁴

This imbalance at the state level is heightened by a growing urban fiscal crisis. The financing problems of New York City, with a potential \$641-million budgetary deficit,⁵ are symptomatic of a general trend of rapidly rising municipal government costs, compounded by increased demands for services at a time when the cities' revenue bases are being eroded.

STATE AND LOCAL GOVERNMENT FINANCING REQUIREMENTS

State and local government expenditures totaled \$181.1 billion in 1973,⁶ reflecting a 10.8 percent average annual growth rate over the ten preceding years (considerably faster than the growth in GNP). This rapid growth is attributable to three major factors: increased reliance on the public sector for the provision of services, changing social and economic conditions causing a greater need for government services, and rapidly increased costs of providing services.

A changing attitude among Americans has resulted

¹ U.S. Department of Commerce, Office of Business Economics, *Survey of Current Business*, vol. 55, no. 6 (June, 1975), Table 1. Figures are presented in terms of current dollars at seasonally adjusted annual rates.

² *Ibid.*, Table 15; figure excludes surplus of social insurance funds that are unavailable for operating expenditures.

³ Joint Economic Committee, *Achieving Price Stability Through Economic Growth* (Washington, D.C.: U.S. Government Printing Office, 1974), p. 65.

⁴ Not all states were facing deficits at the end of their 1975 fiscal year. For example, Texas and California showed large surpluses, and Wyoming even enacted a small tax reduction in the face of its surplus.

⁵ *The New York Times*, July 6, 1975.

⁶ These and following figures on government finances, unless otherwise noted, are from U. S. Department of Commerce, Bureau of the Census, *Governmental Finances in 1972-1973 and preceding years* (Washington, D.C.: U.S. Government Printing Office, 1974).

in greater emphasis on public provision of services. Public educational facilities have assumed an ever increasing share of total education requirements, and the public sector is also being asked to provide health and hospital services, recreational facilities, and welfare benefits.⁷ Other new programs have been required of state and local governments in response to the social costs of the urbanization process, including consumer protection, pollution control, and drug rehabilitation programs.

In addition to greater reliance on publicly provided services, current high rates of unemployment have caused dramatic increases in the cost of social programs. Although the unemployment levels persist, more and more people drop out of the labor force and onto welfare roles; about half of the burden of public assistance programs is borne by states and localities.⁸ In addition, there is a corresponding rise in the demand for other publicly provided social services. This development has had its most significant impact in cities where the flight of the upper and middle

⁷ For a further discussion of the dimensions of the shifting role of the public sector, see Harvey E. Brazier, "The Variable Cost Burdens of State and Local Governments," in *Financing State and Local Governments* (Boston: Federal Reserve Bank of Boston, 1970), p. 95.

⁸ See Tax Foundation, *Facts and Figures on Government Finance 1975* (New York: Tax Foundation, 1975), Table 129, p. 156.

⁹ A comparison of social and demographic characteristics in cities with surrounding areas is presented by Robert D. Reischauer, "Fiscal Problems of Cities," in *Setting National Priorities: The 1973 Budget* (Washington, D.C.: Brookings Institution, 1972), Table 9-2, p. 295.

¹⁰ U.S. Department of Commerce, *Survey of Current Business* (Washington, D.C.: U.S. Government Printing Office, 1965, 1975). The price deflator for state and local government purchases grew from 123.5 in 1965 to 227.3 in 1975 while the personal consumption deflator grew from 109.3 to only 171.8 (in 1958 \$'s).

¹¹ U.S. Bureau of the Census, *Public Employment in 1963, 1974 and City Employment in 1974* (Washington, D.C.: U.S. Government Printing Office, 1964, 1975). This doubling of labor costs in the public sector reflects much higher increases than in manufacturing, where wages rose from \$493 to only \$763 (see U.S. Department of Commerce, *Survey of Current Business*).

¹² E. S. Savas, "Municipal Monopoly," *Harper's Magazine*, December, 1971.

¹³ U.S. Bureau of the Census, *Public Employment in 1963, 1974*.

¹⁴ See, for example, J. P. Russ and Jesse Burkhead, *Productivity in the Local Government Sector* (New York: D. C. Heath & Co., 1974).

¹⁵ Seymour Sacks and John Callahan, "Central City Suburban Fiscal Disparity" in Advisory Commission on Intergovernmental Relations, *City Financial Emergencies: The Intergovernmental Dimension* (Washington, D.C.: U.S. Government Printing Office, 1973), p. 120. The authors noted that the expenditure disparities resulted largely from the high levels of non-educational expenditures required by the central cities. These expenditures were over 95 percent higher in central cities than in their suburbs in 1970.

¹⁶ A tax is said to be "regressive" when persons or families with higher incomes pay a smaller percentage of their income in tax than persons or families with lower incomes. Conversely, a "progressive" tax is one that rises as a percentage of income as one moves up the income scale.

classes has left an increased percentage of poor and aged residents, resulting in an increasing proportion of people who rely heavily on services provided by local governments.⁹

Finally, the pressures of inflation have had a major impact in increasing the expenditures of state and local governments. The price deflator for state and local government purchases grew at one and one-half times the rate of growth of the deflator of personal consumption items.¹⁰ Much of this growth is attributable to increasing wages and other labor costs. From 1963 to 1974, the average monthly wage received by state and local government workers increased from \$457 to \$899.¹¹ The increases in unit wage costs were even greater in larger cities, where average monthly wages reached \$1,006 by 1974.

Substantial increases in fringe benefits for state and local government workers have added to the increased wage costs. The unionization of government employees has had a major impact, helping to bring about liberalized pension and health care programs. Fringe benefits also included shortened workdays and increased sick leave and holidays. From 1940 to 1965, the average workweek of government employees in some areas declined as much as 50 percent, while for the rest of American employees it declined by only 8 percent.¹² As such, added fringe benefits have been a factor in the increase in state and local government employment, which expanded from 6.3 million workers in 1963 to 9.9 million in 1974.¹³

The lack of productivity increases in the public sector is an important factor in the increased labor costs facing state and local governments.¹⁴ Changes in the environment in which the services are being provided also add to labor costs. Increased population density and urban congestion, combined with the deterioration of buildings and equipment, mean that more workers are needed to perform the same jobs. These factors have had their greatest impact in the older, industrialized cities which, as a result, face higher costs of providing government services.

Wide interarea differentials in the expenditures of state and local governments reflect cost and need differentials and differing conceptions of the role of the public sector. Per capita expenditures by state and local governments range from \$2,379 in Alaska to only \$549 in Arkansas. The eight states with the lowest expenditures per capita are all southern. Higher expenditures in urban areas have been documented in a study showing that per capita local expenditures in central cities exceeded those in suburban areas by over 25 percent in a 72-city sample.¹⁵

Rapidly rising expenditures have placed heavy burdens on state and local revenue sources. The major characteristics of the state-local tax system are its regressivity and its sluggish response to income growth.¹⁶ States draw substantial tax revenues from consump-

tion taxes, and local governments rely heavily on property taxes. At constant tax rates, state and local tax receipts have barely risen in proportion to GNP while, as shown earlier, expenditure growth is at least one-third faster than the GNP growth rate.¹⁷

State Taxes. The largest single source of state taxes in 1974 was the general sales tax, from which 30.5 percent of all state tax revenue was derived. Over 45 states now levy retail sales taxes at rates varying from 2 percent to 7 percent. States derive another 19.9 percent of all tax revenue from their selective excise taxes. These taxes have been shown to be regressive.¹⁸ In addition, current unemployment has produced declining retail sales and corresponding declines in tax revenues. Inflation, however, works to expand revenues from sales taxes, but two factors limit this growth. First, many states, in an effort to ease the regressivity of their sales taxes, have eliminated food from the tax base. Since a substantial part of the recent inflationary price increase has been in increased food costs, eliminating food from the base has diminished revenue gains during recent periods of inflation. In addition, since most excise taxes are levied on quantity and not on price, they fail to bring in expanded revenues during inflationary periods.

Another source of state taxes is the personal income tax, which accounts for 22.9 percent of all state tax

revenues. Forty states tax personal income¹⁹ under varying rate structures, offering differing exemption and deduction programs. The incidence of these personal income taxes depends on the rate structure in each state. In general, they tend to have slightly less progressive rate structures than the federal income tax. However, since the federal government allows the deduction of state income taxes and states generally allow for the deduction of federal income taxes, the net burden imposed by state income taxes is generally heavier on lower and middle income classes than on higher income groups. Because the graduation of most state income taxes terminates at a lower level than the federal tax, state income taxes are much less responsive to inflationary wage increases than the federal tax. In addition, the revenue-generating capacity of most state income taxes has been lessened in the face of current high levels of unemployment, which have placed many individuals in lower income brackets, able to take advantage of additional exemptions offered low income families. This is exacerbated by the fact that unemployment compensation benefits are tax exempt.

The states' only other major revenue source is the corporate income tax, although license taxes and estate and gift and assorted other taxes generate some state revenue.

Local Taxes. The property tax is the major source of local tax revenue, representing about 83 percent of local tax receipts.²⁰ The recent introduction of sales and income taxes by certain local governments, particularly cities, has provided some new revenue sources, but the property tax still provides the backbone of local government financing.

Property taxes have long been thought to be regressive, although this conventional wisdom has recently come under considerable attack.²¹ Still, the most striking feature of property taxation is the variation in base that exists among states and among localities.²² Such variations have resulted in widely differing local capacities and resulting differences in the tax effort needed to finance government services. Areas with low tax bases are forced to exert a much higher tax effort to raise the same revenues as high property base areas.

The differential between city and suburban property tax bases is most marked, and the gap has been increasing as the property values of suburban areas have appreciated rapidly while city values have grown more slowly and in some areas have even decreased. This is a particularly pressing problem, because city expenditures are rising more rapidly than those of the suburbs. The result has been continued tax increases. In New York City, for example, the true value of housing grew only 1 percent over the last ten years while taxes levied on city residents grew 21 percent.²³

An important issue concerning local government

¹⁷ Joseph A. Pechman, *Federal Tax Policy* (Washington, D.C.: Brookings Institution, 1971), p. 212.

¹⁸ The regressivity of the sales tax is based on the fact that in any year, low income families will, on the average, consume a higher fraction of their income than will high income families. Such an assumption is borne out by the yearly data on consumption gathered by the U.S. Bureau of Labor Statistics. However, other analyses have demonstrated that when consumption expenditures are viewed against measures of permanent income, they may in fact not be so regressive. See D. G. Davies, "Progressiveness of a Sales Tax," *American Economic Review*, December, 1960; and R. A. and P. B. Musgrave, *Public Finance in Theory and Practice* (New York: McGraw Hill, 1973), pp. 424-434.

¹⁹ Three other states tax some limited form of personal income (dividends, interest, capital gains, or commuter income), leaving only seven states without any tax on personal income.

²⁰ Tax Foundation, *op. cit.* Table 196, p. 243.

²¹ For a further discussion of the issue of property tax incidence, refer to Richard Musgrave, Karl Case, Herman Leonard, "The Distribution of Fiscal Burdens and Benefits," *Public Finance Quarterly*, 1974; Henry Aaron, "The Property Tax: Progressive or Regressive? A New View of Property Tax Incidence," *American Economic Review*, May, 1974, pp. 212-235; and Dick Netzer, "The Incidence of the Property Tax Revisited," *National Tax Journal*, vol. 26, no. 4 (December, 1973), pp. 515-535.

²² Although varying assessment practices make interarea comparisons difficult, wide variations in property tax base per capita have been documented in Advisory Commission on Intergovernmental Relations, *Measuring the Fiscal Capacity and Effort of State and Local Areas* (Washington, D.C.: U.S. Government Printing Office, 1971), Tables G-1 and G-2; and Helen Ladd, "The Role of the Property Tax: A Reassessment," in Richard A. Musgrave, *Broad-Based Taxes: New Options and Sources* (Baltimore: Johns Hopkins University Press, 1973).

²³ *The New York Times*, July 14, 1975.

Table 1: State and Local Government Expenditures By Financing Source (in percents)

	1963	1973
Federal government	13.5	21.7
State governments	40.2	41.2
Local governments	46.3	37.1

Source: U.S. Department of Commerce, Bureau of the Census, *Governmental Finances in 1962-1963, 1972-1973*, Tables 17 and 18.

reliance on property taxes is their slow response to economic growth. Since reassessments are undertaken infrequently and there is a tendency to undervalue high-value property, property value appreciation is not reflected immediately in expanded property tax bases. Thus, the local revenue structure does not provide necessary increases in tax revenues at a time when the demand for those revenues is increasing markedly.

Revenue-Raising Capacity Differentials. Interarea revenue-raising capacity comparisons can be made by applying a uniform tax rate structure to existing bases in each area. It has been estimated that the revenue-sharing capacity of the state with the greatest capacity is 2.6 times that of the state with the least capacity.²⁴ A strong regional factor seems to be involved; the seven lowest capacity states are in the South while the five highest are in the West. When revenue-raising capacity is viewed in terms of tax rates, the overall differential is less, with the tax rates of the state with the highest rates 1.9 times higher than the lowest. There is a smaller regional variation, although the lowest capacity states generally exhibited below average revenue effort. One point stood out: highly urbanized states exhibited higher tax efforts, corresponding to their greater revenue needs.

Debt Financing. Debt financing has come to play an increasingly important role in financing both long-term capital projects and, for some areas, temporary revenue shortfalls. Total debt outstanding of state and local governments more than doubled from 1963 to 1973, to a level of \$188.5 billion. While many states have legislated provisions that strictly limit their ability to borrow, particularly to finance current operating expenditure deficits, debt financing still plays a growing role in state and local government financing.

The rising cost of borrowing money has been a significant factor in the rapid growth of total state and local government expenditures. While governments

could borrow at 3 percent to 4 percent interest rates in the late 1960's, these rates averaged 6 percent to 7 percent in 1974. Under the present structure, the federal government subsidizes the cost of state and local bonds from taxable income under the personal income tax.

The federal government annually loses an estimated \$4 billion in revenues as a result of the exclusion of state and local bond interest from the income tax base. However, resulting gains in reduced interest costs for states and localities total less than \$3 billion.²⁵ The difference accrues to those individuals whose high incomes and thus high marginal tax rates make the tax-free bonds attractive investments. Such a subsidy is thus grossly inefficient and inequitable.

FINANCING STRUCTURE: FEDERAL, STATE, AND LOCAL ROLES

The revenue-raising capacity of state and local governments has not expanded in proportion to their rapidly rising expenditure needs. A primary cause of this has been the impact of the current recession/inflation on the expenditure side that has not been countered by corresponding increases on the revenue side. Large interarea differentials in needs and in revenue-raising capacity have produced financing gaps in certain areas.

The relative role of various levels of government in financing state and local public expenditures has been shifting markedly, as reflected in Table 1. The expanded role of the federal government in providing aid to state and local governments produced the largest shift; however, it was the combination of increased federal and state aid that lessened the relative burden of local governments, which now finance less than two-fifths of all state and local expenditures.²⁶ The financing role of the state governments has remained relatively constant since increases in federal aid worked to offset the increased financing demands of their state aid programs.

Although the primary responsibility for financing state and local governments has shifted away from the local level, local governments still account for 63 percent of direct expenditures, nearly the same percentage as ten years earlier. The only significant shift has come in the area of welfare services, where the states have begun assuming a greater role in an effort to equalize benefits; in 1973, states accounted for 60 percent of all state and local expenditures for welfare, up from 50 percent ten years earlier. Large differentials exist in the relative roles of state and local government, ranging from New York, where local governments make 78 percent of all direct expenditures, to Hawaii, where they make only 20 percent.

Federal Aid. The federal budget for fiscal year 1976 reflects \$56.0 billion in federal aid to state and local governments. The growth of federal aid is

²⁴ Advisory Commission on Intergovernmental Relations, *op. cit.*, pp. 10-30.

²⁵ Stanley S. Surrey, "The Case for Broadening the Financial Options Open to State and Local Governments," in *Financing State and Local Governments* (Boston: Federal Reserve Bank of Boston, 1971), p. 114; and "The Sheltered Life," *New York Times Magazine*, April 13, 1975, p. 50.

²⁶ Expenditures financed by local governments still increased at an average annual rate of 8.4 percent even though the local role declined markedly.

Table 2: Impact of Federal Grant Outlays on Government Expenditures

Fiscal Year	Amounts (millions)	Federal aid As a percent of—			Amount deflated ³
		Total federal outlays	Domestic federal outlays ¹	State-local expenditures ²	
1960	\$ 7,040	7.6	15.9	14.7	6,815
1965	10,904	9.2	16.6	15.4	9,832
1970	23,954	12.2	21.1	19.1	17,717
1971	29,849	14.1	22.7	21.1	21,110
1972	35,940	15.5	23.8	23.0	24,600
1973	43,963	17.8	26.1	25.2	28,490
1974	46,040	17.2	24.7	23.6	27,054
1975 estimate	52,649	16.8	23.6	23.3	27,922
1976 estimate	55,632	15.9	22.3	22.2	27,445

¹ Defined for this purpose as excluding national defense and international programs.

² As defined in the National Income Accounts.

³ Amounts in column 1 were deflated using the implicit GNP price deflator, in *Survey of Current Business*; for FY75 and FY76, the GNP deflator was calculated by applying the projected rate of growth of the deflator published in the federal budget for 1976.

Source: *Special Analyses: Budget of the United States Government, Fiscal Year 1976* (Washington, D.C.: U.S. Government Printing Office), Table 0-4 p. 242.

shown in Table 2. From 1970 to 1973, there was a 22.6 percent average yearly increase. However, since 1973, the rate of growth in federal aid as a percentage of total federal outlays and as a percentage of state-local expenditures has actually declined.²⁷

The 1976 federal budget provides only a \$3-billion increase in federal aid above the 1975 level. In addition, if the level of federal aid is adjusted by the GNP price deflator, the real level of aid for 1976 is below the 1973 level. The proposals for the 1976 federal budget incorporated various cuts in grants-in-aid programs,²⁸ but even if Congress fails to enact these decreases, federal aid will only increase \$4.9 billion over 1975 levels, and the 1976 level in real terms will remain below the 1973 level.

The proposed cutbacks in federal aid to state and local governments of the administration of Gerald

Ford are remarkable in light of the fiscal crises these bodies face. While the fiscal needs of cities have been rising dramatically as a result of national economic forces beyond their control, federal programs have been declining in real terms.

Distribution of Federal Aid. Federal grants-in-aid are distributed as either block or categorical grants. Categorical grants have been implemented to counteract the inefficiencies in expenditure that would result if local governments were left to finance services that have "spill-over" benefits to larger areas. These categorical grants have been the primary form of federal aid, and it is only recently that the federal government has been providing block grants, allowing the state and local governments to determine their highest priority needs. The increased public demand for a requisite minimum provision of services, combined with the need for equalization of lower governments' fiscal positions to provide similar services with roughly comparable tax efforts, has stimulated this shift to block grants.²⁹ In either case, federal aid may come in the form of outright aid or "matching" grants. Requiring state and local governments to "match" funds does ensure a higher spending level, and thus higher need fulfillment, but it does have the unfortunate effect of enabling richer governments to make fuller utilization of federal aid programs.

One way of measuring the effectiveness of federal aid programs is in terms of their ability to channel funds to areas facing fiscal imbalance. Enacted in 1972, the federal revenue sharing program distributes federal funds to state and local governments with virtually no restrictions. Outlays of \$6.3 billion will be distributed during fiscal 1976, representing over 11 percent of total federal grants. Distribution is based on a formula that incorporates population, tax effort,

²⁷ The impact of the federal government in providing funds to finance state and local services is greater than the level of \$56 billion indicates since it undertakes direct payment for many programs that benefit the residents of local areas. These include federal programs, such as the \$5.5 billion supplemental security program for the aged, blind, and disabled, the exclusion of state and local securities from taxable income that allows state and local governments to borrow at reduced rates (at a cost to the federal government of about \$4.8 billion in 1976), and the deduction of state and local taxes by individuals from federal income taxes (costing the federal government an additional \$16.1 billion).

²⁸ These included lowering the federal share of Aid to Families with Dependent Children (AFDC) and social service grant payments, lowering of federal matching funds for the wealthiest states under the Medicaid program, and elimination of the education grant to federally impacted areas and vocational education programs.

²⁹ See Richard Musgrave and A. M. Polinsky, "Revenue Sharing—A Critical View," in *Financing State and Local Governments* (Boston: Federal Reserve Bank of Boston, 1970), for a complete discussion of the varying needs for federal aid.

Table 3: Per Capita Distribution of Grants, Selected Fiscal Years

Federal Region ¹	1969	1971	1973	1974	Percent change 1969-1974
I—Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island	\$102	\$144	\$202	\$231	126
II—New York, New Jersey, Puerto Rico, Virgin Islands	103	159	235	254	147
III—Virginia, Pennsylvania, Delaware, Maryland, West Virginia, District of Columbia	94	147	220	223	137
IV—Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Florida	101	142	200	203	101
V—Illinois, Indiana, Michigan, Ohio, Wisconsin, Minnesota	77	105	172	184	139
VI—Arkansas, Louisiana, Oklahoma, New Mexico, Texas	111	145	209	206	86
VII—Iowa, Kansas, Missouri, Nebraska	88	117	168	161	83
VIII—Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming	136	178	251	242	78
IX—Arizona, California, Nevada, Hawaii, other territories	116	168	228	226	95
X—Idaho, Oregon, Washington, Alaska	117	172	267	258	121
United States	99	141	212	215	117

¹ These are not the same regions as those used for National Income Account computations.

Source: *Special Analyses: Budget of the United States Government* (Washington, D.C.: U.S. Government Printing Office), Table 0-5.

and income level,³⁰ and thus works to equalize distribution according to fiscal capacity and tax effort.³¹ An analysis of the 25 largest cities of the United States showed that shared revenue received per capita was greater in central cities than in the balance of standard metropolitan areas. An actual narrowing of the fiscal inequities of metropolitan cities and their suburbs took place, because cities received a larger benefit in relation to their own-source financing.³²

Several other federal grant programs, including the CETA (Comprehensive Employment Training Act) and the new HUD (Housing and Urban Development) programs utilize distributional formulas designed to give the greatest funds to the areas of greatest need. The formulas incorporate such demographic and socioeconomic characteristics as population density, proportion of low-income residents, and unemployment levels. The distributional implications of the combination of categorical and noncategorical federal grant programs have shifted slightly over time. Viewed on a per capita basis, federal distribution varies widely among the states. Historically, the large funding of categorical grants for highway

construction and federal land holdings resulted in greater aid going to states with low population density and extensive federal land holdings. The growth of human resource programs has changed this and has helped equalize the distribution of federal aid per capita (see Table 3): the spread between the highest and lowest region dropped from 77 percent to 60 percent between 1969 and 1974.

State Aid. The role of state governments in helping local governments provide services has also shifted markedly. The same goals that justify expanded federal aid programs also apply to the state's role with respect to local financing. When program benefits affect wide areas, efficiency of expenditure requires financing at a higher level. In addition, continued pressure for provision of minimum service levels and

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³⁰ Actually, two formulas exist, and the allocation is based upon the formula which allots the most aid. The second formula incorporates population, urbanized population, per capita income, income tax collections, and tax effort.

³¹ The distribution of funds under the formula was shown to favor states with relatively low fiscal capacity as measured by their tax-raising or total revenue-raising potential rather than by their per capita income. See Richard Nathan et al., *Monitoring Revenue Sharing* (Washington, D.C.: The Brookings Institution, 1974), p. 90.

³² *Ibid.*, pp. 108, 133.

Karl E. Case II is co-author of a recent article entitled "The Distribution of Fiscal Burdens and Benefits" (with Richard Musgrave and Herman Leonard, *Public Finance Quarterly*, 1974) and of a forthcoming book, *Discrimination in Nonmetropolitan Housing Markets: An Econometric and Institutional Analysis* (Lexington: D. C. Heath Co.). Virginia Rogers assisted in the preparation of the book by Steven J. Weiss et al., *Options for Fiscal Structure Reform in Massachusetts* (Federal Reserve Bank of Boston, 1975) and is presently writing a book entitled *State & Local Fiscal Relationships in Connecticut: Opportunities For Reform* (Federal Reserve Bank of Boston).

"Energy price inflation has had a far-reaching impact on the nation's gross national product, on employment and on prices—an impact much stronger than might be expected from the size of the energy price escalations themselves."

Energy Shock: Oil and the Economy

BY LAWRENCE KUMINS

Energy Economist, Congressional Research Service, Library of Congress

THE CARTEL PRICING actions of the Organization of Petroleum Exporting Countries (OPEC)¹ in 1973 and afterward had an enormous effect on the American economy and the economies of many other countries dependent on the world oil market.*

OPEC was established after the 1959 reduction in prices paid to oil producers by the seven major international oil companies, the "seven sisters" who dominate world oil commerce. Faced with a chronic glut of oil on world markets, a phenomenon characteristic of the international crude market prior to 1973, the major oil companies, acting as one either by design or happenstance, took the classic step of a monopsonistic buyer (one strong buyer facing several uncoordinated sellers)—they unilaterally lowered crude prices approximately 10 percent to 15 percent.² Subsequently, in September, 1960, five major crude exporters, meeting in Baghdad, formed OPEC to organize a united front vis-à-vis the monopsonistic "seven sisters." It would be 13 years before OPEC would become a truly effective cartel, setting prices and supply levels on world markets by fiat alone.

OPEC was able to bring its potential power to bear because industrialized nations other than the United States vastly increased their oil consumption during the 1960's. Until 1968, the United States produced 80 percent of its own consumption; thereafter, world

consumption began to increase and the cartel faced a more manageable situation. Additional world demand was created by declining United States production, which peaked in 1970, and internal American demand, which continued to grow at about seven percent per year. The failure of American domestic production to keep pace with internal demand created an increased demand on world markets; the United States demand grew from about 2.5 million barrels per day (mbd) in 1970 to 6.5 mbd just before the embargo (the current level of United States imports remains at about the 6.5 mbd pre-embargo level). This extra demand on world markets, caused by falling United States production and the steadily increasing American demand, strengthened OPEC's position. The United States was becoming more and more dependent on OPEC oil, and this became increasingly clear to the nations that halted oil shipments to the United States in late 1973.

Some OPEC watchers believe that the Arab oil embargo was motivated more by economics than by politics. In early 1973, the embargoing Organization of Arab Petroleum Exporting Countries (OAPEC)³ was receiving an average price for crude oil of under \$3.00 per barrel. When the embargo created a shortfall in world supply, the OPEC group as a whole raised prices in several steps, quadrupling per barrel revenues and greatly increasing their gross revenues, in spite of a somewhat reduced world demand because of higher prices.

With the exception of Canada, most United States oil imports come from OPEC, and American dependency has increased since the embargo. In fact, in 1975, 66 percent of our imports were from OPEC,⁴ up from 56 percent during the fall of 1974. In roughly their order of importance, the following countries provided about 90 percent of United States imports: Nigeria, Canada, Iran, Saudi Arabia, Venezuela, Indonesia, Algeria, and the UAE.

* I wish to thank my colleague, Dr. Warren E. Farb, for his assistance in preparing this paper.

¹ OPEC member nations are Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

² See *OPEC, Background Review and Analysis*, a Library of Congress, Congressional Research Service, publication by Dario Scuka (published in multilith form).

³ This organization's members are Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia and the UAE, the nations that actually halted United States-bound shipments.

⁴ See *The Effects of Decontrol*, an August 18, 1975, Federal Energy Administration paper, Chart 1.

Table 1: Distribution of Energy Consumption by Source and by Sector

Consuming Sector	Oil	Natural Gas	Coal
Household and Commercial	20.2%	34.0%	2.7%
Industrial	17.4	46.0	33.0
Transport	51.7	3.5	nil
Electric Generation	9.9	16.6	64.3

Source: *Energy Background* (Washington, D.C.: American Petroleum Institute, December, 1974).

Canada, once the main American import source, is phasing out oil and natural gas exports. This is ironic because, not long ago, the United States restricted imports to provide price competition protection for domestic producers. Canada had sought (and not received) preferential treatment under the import restriction program, in order to tap vast United States fuel markets to finance the development of what was regarded, during the 1960's, as a very large potential oil reserve. This resource base, however, turned out to be smaller than anticipated, and with disappointing discoveries the Canadian government adopted a conservation policy that was based on export curtailment. Coupled with a declining United States production (about 10 percent below early 1974 levels), this has caused increased United States dependence on OPEC. Because most of the world's potential for increased supplies in the near future lies within the cartel nations, much of the future increase in United States import levels will come from OPEC until the trans-Alaska pipeline is completed.

THE IMPORTANCE OF OIL

Because oil fuels provide about 45 percent of the total energy input into the United States economy, embargo and post-embargo price increases affected nearly all end products. More than half the oil consumption is used by the transport sector; hence anything that is shipped will, as it reaches market, embody the increased cost of oil in its sale price. Table 1 indicates the distribution of oil and other fossil fuel consumption by various broad sectors of the economy.

Because oil is by far this country's most important fuel, it exercises price leadership over coal and whatever natural gas is not price controlled by the Federal Power Commission (FPC). Therefore, higher oil fuel prices mean higher coal and unregulated natural gas prices. During the year and a half after the embargo, these other fuel prices, on a heat value basis, increased in price proportionately to the average barrel of oil fuel escalation.

The post-embargo energy price experience of the United States shows that OPEC energy pricing policy invades and dominates the domestic fuel marketplace. Many observers believe that there can be no free market for energy, and that the choice lies between

OPEC cartel price fixing and government price controls. Proponents of government controls cite the inflationary impact of uncontrolled oil prices.

ENERGY PRICES, INFLATION AND RECESSION

There was clearly a relationship between energy price increases and inflation, employment and real (constant 1958 dollar) GNP in the period that includes the fourth quarter of 1973 to the second quarter of 1975. Simply stated, the current deep recession's early history was interrelated with record inflation. Rapid price increases reduced purchasing power. Decreased purchasing power resulted in the purchase of fewer goods and services, measured in terms of physical units. Fewer units of output sold necessitated lower employment. This became a cycle, starting a self-reinforcing recessionary process in which gross national product (GNP) and employment contracted.

This cycle was amplified by the fact that the primary inflationary impact stemming directly from the aggregate energy price increase itself was smaller than the total amount of inflation generated. In other words, the initial price impact generated a wave of secondary inflation, frequently called the "ripple" effect. A ripple effect is felt because a price increase in a commodity that enters into the manufacturing process at an early stage becomes involved in layer on layer of markup as it passes through successive stages of manufacturing and distribution. A simple example of how this works is pricing in a department store. Typically, major retailers buy an article at some cost and double its price (what retailers call a 50 percent markup). If, for example, an item cost the retailer \$1.00, it will sell for \$2.00. Now if that item embodies 25 cents worth of energy at the manufacturer's level, and if energy prices double, the manufacturer will sell the item to the retailer for \$1.25 under a doubled energy price regime. The retailer takes his normal 50 percent markup, and sells the item for \$2.50. Because of an energy increase of 25¢, the retail price increases 50¢. This process is repeated many times throughout the economy, in manufacturing as well as in distribution and retailing, creating a secondary wave of inflation.

Wage contracts and transfer payments are also involved because they are tied into the cost of living or otherwise "indexed." These automatically increase as the relevant price index rises, amplifying secondary inflation. The markup phenomena and the indexing effect combine to make the total inflationary effect from a given energy price increase larger than the sum of the energy price increase elements themselves.

Since late 1973, oil fuel prices and coal and unregulated natural gas prices have risen. These price increases, totaling \$49.3 billion, are the principal propellant behind the generalized price inflation of 1974

and the first half of 1975. Crude oil prices were originally controlled under Cost of Living Council (CLC) regulations at \$4.25 per barrel. "New" oil was decontrolled in August, 1973. It began to rise and has continued to increase. Under the \$2.00 tariff surcharge, in effect at the end of the second quarter of 1975, uncontrolled domestic crude sold for over \$12.50 per barrel at the end of that quarter. An average of 3 million barrels per day (mbd) were involved in the period between the fourth quarter of 1973 and the second quarter of 1975. At an average annual rate, the increased total bill may be computed as: $3 \text{ mbd} \times 365 \times (\$12.50 - \$4.25)$, or a total of \$9.0 billion per year.

Just before its merger into the Federal Energy Administration (FEA), the CLC increased "old" oil prices by \$1.00 per barrel, from \$4.25 to \$5.25. Old oil is defined as crude produced from wells that were producing in 1972 or earlier. Production above 1972 levels from those wells is not controlled, being classed as new oil. About 5.5 mbd of old oil was involved during the period under consideration. The increase in the aggregate bill is estimated roughly at an average annual rate of \$2.0 billion ($5.6 \text{ mbd} \times 365 \times \1.00).

The Emergency Petroleum Allocation Act, now expired, gave the FEA authority to regulate fuel dealers' margins. Early on, FEA raised gasoline dealers' margins from a traditional 7.25 cents per gallon to 11 cents. Subsequently, this figure eroded slightly to average an estimated 9.5 cents. About 100 billion gallons annually were affected, raising the national gasoline bill \$2.3 billion annually, $100 \text{ bil. gallons} \times (9.5¢ - 7.25¢)$.

At the same time, foreign oil increased from a pre-embargo \$4.00 or so per barrel, to an average price of \$14.00 under the new tariffs, in the second quarter of 1975. Roughly, 6.5 mbd of crude and foreign refined products embodying this expensive crude were involved. An easy cost calculation to make here is: $6.5 \text{ mbd} \times 365 \times (\$14.00 - \$4.00) = \23.7 billion , again at an average annual rate.

It must be remembered that oil has a clear-cut role as the energy price leader. Rising oil prices have escalated unregulated natural gas prices. About 10 trillion cubic feet (or billion Mcf's) are involved in unregulated intrastate sales not jurisdictional to the FPC—either made directly by producers at the well-head or by interstate pipelines to intrastate customers. Prices have increased from about 55¢ per Mcf (1,000 cubic ft.) to an estimated \$1.40 current average. Absolutely no data is available at present on intrastate prices, and these figures represent crude estimates made on the basis of fragmentary press reports. Nevertheless, they are probably of the correct order of magnitude. Using them, a rough estimate of the contribution of gas to the energy price inflation would

be: $10 \text{ bil. Mcf} \times (\$1.40 - \$0.55) = \8.5 billion at an average annual rate.

Coal is also influenced by oil's price leadership. According to Federal Power Commission Form 423 statistics, covering about 60 percent of domestic coal consumption, coal prices climbed from an average of \$9.10 per ton in October, 1973, to \$17.51 in April, 1975 (the latest data available). Extrapolating this is roughly 450 million tons of annual domestic consumption of boiler fuel type, oil-competitive coal, we can calculate that: $450 \text{ million tons} \times (\$17.51 - \$9.10) = \3.8 billion .

In a rough way, these estimates delineate the aggregate inflationary contribution of energy prices during the post-embargo period under analysis. The estimated components are summed up here:

Domestic Uncontrolled Crude	\$ 9.0 billion
Old Oil Increase	2.0
Gasoline Dealer Margins	2.3
Imported Oils	23.7
Unregulated Natural Gas	8.5
Coal	3.8
	<hr/> \$49.3 billion

We can estimate that the dollar value of energy price increases was running at an annual rate of \$49 billion at the end of the period under study. As this raw material price increase flows through the economy, the total inflationary contribution will be larger than \$49 billion worth of annual inflation due to the ripple effect, and the energy shock drag on other macroeconomic variables will be proportionately larger.

MEASURING ENERGY SHOCK

Because post-embargo macroeconomic statistics are history, the key question is what would have happened to the economy with virtually no energy price increases. To simulate this, an exercise was devised using the Data Resources Inc. (DRI) econometric model. This model is a computerized system of hundreds of interrelated equations that relate many economic variables like prices, monetary and fiscal policy, imports and so forth to the important macroeconomic parameters like income, aggregate price levels and employment. The model is commercially available; it is used by nearly all government economic policy makers at the federal level and by many private firms to estimate the impact of various alternative policies on the economy. For our purpose, the question was posed: "What would the economy have

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Lawrence Kumins is the author of a number of reports on energy for members of congressional committees. He formerly served as a Federal Power Commission consultant and as an oil industry consultant.

BOOK REVIEWS

ON THE ECONOMY

AMERICA'S IMPACT ON THE WORLD. A STUDY OF THE ROLE OF THE UNITED STATES IN THE WORLD ECONOMY, 1750-1970. BY WILLIAM WOODRUFF. (New York: Halsted Press, 1975. 296 pages, notes, tables, bibliography and index, \$12.95.)

This is a companion volume to *Impact of Western Man*. Here William Woodruff, whose field is economic history, traces the growth of America's empire, the enormous influence of the United States on world finance, the impact of American technology, the effects of the United States on world commerce. "Since 1945," this author points out, "the commercial and technical influence of the American people has come to exceed that of any other western nation."

Woodruff admires Americans; nonetheless, as he sees them, Americans as a people lack a historical sense: "most Americans are completely unable to see their own history in a world context. . . . Their belief that they can ignore history and wipe the slate clean and start all over again . . . has caused them to have little sense of proportion regarding the limits of human effort." This is why Americans have tended to believe that "they could provide a prescription for the world's economic ills."

Discussing the impact of American foreign aid, the author traces the change from private aid to government aid granted by the United States since World War II. "What is new about America's experience during the past 30 years is the amount of aid given; also, what the Americans have expected to get out of it. While many people have thought they might save the world's soul, only the Americans have suffered the illusion that with enough money they might save the world's economy."

Summing up, Woodruff notes that "No nation ever began its life with greater aspirations to human betterment, or grew in power and influence with such astonishing speed." America's enormous material achievements are uncontested. Her economic impact on the world has been incalculable. "America is the land that taught the rest of the world that it need not starve."

Still, Woodruff believes that America's affluence and ignorance of history have led to disillusionment. "It is the Americans' inability to make allowances for the past in the present that has led them to offer idealistic, universal solutions to the

world's ills based on a completely false analogy with an American 'norm.' . . . In promising economic development for all, Americans have never questioned that the material advance of the United States might have sprung from non-recurring historical circumstances; that the world might be too vast and too complex a place for them to have anything but the slightest effect upon it." This is a provocative and well-written study. O.E.S.

THE WORLD IN DEPRESSION, 1929-1939. BY CHARLES P. KINDLEBERGER. (Berkeley: University of California Press, 1975. 336 pages, bibliography and index, \$11.25.)

Charles Kindleberger, a self-confessed Keynesian, has written an excellent history of the great world depression of 1929-1939, largely from an American point of view; the author is frank to state that the economic history of the U.S.S.R. and Asia was not his field of study and thus his total picture is somewhat distorted. Originally issued in 1973 and now reissued, the book finds the keys to the length of the depression in the international monetary mechanism.

"This is where I came in" wrote the author, when he was first asked to write this work; he was speaking of his college days during the Great Depression. However, only five years after his original study of the causes of a depression, the world economy was again struggling, trying to recover from what has politely been called a deep recession. Consequently, many of Kindleberger's conclusions are applicable to the world economy today.

Kindleberger disagrees with Milton Friedman's view that the main single cause of the 1929 depression was in the monetary policy of the United States; he also disagrees with Paul Samuelson, who holds to the thesis that the depression resulted from a series of historical errors. He believes that to prevent depressions in the future or to mitigate their effects, "the international economic and monetary system needs leadership, a country which is prepared consciously or unconsciously, under some system of rules that it has internationalized, to set standards of conduct for other countries; and to seek to get others to follow them, to take an undue share of the burdens of the system, and in particular to take on its support in adversity. . . ." Britain performed this role until 1913; then she lost her ability to underwrite the system. The United States was reluctant to take on the burden until forced to do so in 1936. It is interesting to spec-

ulate what role Kindleberger would assign to the increasing price of oil. O.E.S.

RESTRAINING MYTHS: CRITICAL STUDIES OF U.S. SOCIAL STRUCTURE AND POLITICS. BY RICHARD F. HAMILTON. (New York: Halstead Press, 1975. 296 pages and index, \$15.00.)

A restraining myth in social theory, according to Richard Hamilton, is one wherein the claims of a theory prove to be unfounded but are, nevertheless, still widely accepted. The author brings evidence to bear on some of our dominant social theories; he finds many of their claims to be unsupported, and labels them as restraining myths. He focuses his attention on the three major traditions of contemporary social discussion: the "centrist" social science position, the "mass society" theory, and the pluralist theory. Hamilton illustrates the value of reexamining "conventional wisdom" and the necessity for fresh research before framing new solutions to contemporary social, economic and political problems. O.E.S.

RACE AND ECONOMICS. BY THOMAS SOWELL. (New York: David McKay Company, Inc., 1975. 276 pages, notes and index, \$9.95, cloth; \$4.95, paper.)

The author, a professor of economics at the University of California, Los Angeles, examines the influence of racial discrimination on the economic situation of various ethnic minorities in the United States. The short- and long-range effects of race-based slavery, the economic discrimination against other American ethnic groups, and the economics of race are considered in turn. Color, language, religion and time of arrival in America's cities all played a role in establishing economic and social differences. Median ages and regional distribution also result in income differences and differences in employment rates. "The word 'discrimination' has often been used to cover such widely different situations that it is of little help in specifying causes, effects, or corrective policies. If *all* differences between the earnings, occupations, employment, etc. of different ethnic groups are simply *defined* as discrimination, then it is circular reasoning to say that discrimination *causes* these differences. . . ."

How can ethnic and racial minorities overcome their economic handicaps? There is no easy answer, because attitudes of self-reliance play such a major role and are slow to develop, while forms of charity and preferential treatment undermine self-reliance. O.E.S.

THE NEW SOVEREIGNS: MULTINATIONAL CORPORATIONS AS WORLD POWERS. EDITED BY ABDUL A. SAID AND LUIZ R. SIMMONS.

(Englewood Cliffs: Prentice-Hall, Inc., 1975. 186 pages, \$7.95.)

Multinational corporations (MNC's) are growing in strength: "several of the larger MNC's exert more collective influence than all but a handful of nation-states. In this collection of essays, 14 specialists examine the role of the MNC's in our changing world. The concluding essay notes that "The global industrial imperative . . . leads to a large number of MNC's in rich countries and very few based in poor countries. . . . The global *political* imperative requires that the power embodied in the MNC's wealth cannot continue unleashed and unconnected to the citizenry of various nation-states." O.E.S.

INDUSTRIAL CONCENTRATION AND INFLATION. BY STEVEN LUSTGARTEN. (Washington, D.C.: American Enterprise Institute for Public Policy Research, 1975. 55 pages and appendix, \$3.00.)

The author examines the relationship between a concentrated industrial sector and rising prices.

NONFUEL MINERALS: U.S. INVESTMENT POLICIES ABROAD. BY RAYMOND F. MIKSELL. (The Washington Papers, vol. 1, no. 8, Beverly Hills and London: Sage Publications, 1975. 94 pages and references, \$3.00.)

The importance of United States investments abroad, the extent of United States dependence on overseas resources and the relations between the United States and the host countries are examined.

PUBLIC EMPLOYMENT PROGRAMS. BY ANN FECHTER. (Washington, D.C.: American Enterprise Institute for Public Policy Research, 1975. 35 pages and appendix, \$2.50.)

The author concludes "that a large-scale public employment program, although politically attractive, appears to represent an undesirable use of resources."

INTERDEPENDENCE AND THE WORLD ECONOMY. BY JAMES HOWE. (Headline Series, no. 222, Washington, D.C.: Foreign Policy Association, 1974. 62 pages and references, \$1.25.)

This pamphlet reexamines the Arab oil embargo and its effect on the nations of the world, both industrial and developing.

THE PHENOMENON OF WORLDWIDE INFLATION. EDITED BY DAVID I. MEISELMAN AND ARTHUR B. LAFFER. (Washington, D. C.: American Enterprise Institute for Public Policy Research, 1975. 218 pages, \$8.50, cloth; \$4.00, paper.)

Eight leading economic scholars address them-
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UNITED STATES MONETARY POLICY

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not receive high marks. Interest rates have hit historic highs on several different occasions; price inflation reached double-digit figures in 1974; unemployment exceeded 9 percent of the labor force at the beginning of 1975; international money markets are in disarray and real economic growth has become elusive. Rapid shifts in monetary policy appear to have exacerbated the instability of the economy. As a result, monetary policy in general and its specific conduct have become the target of public frustration and the focus of vehement criticism and blame.

Different groups propose contradictory solutions. Clearly, as the domestic economy has become more complex and the United States' economy has been more intertwined with the economies of other nations, determining the appropriate conduct of monetary and fiscal policy has become more difficult. Congress has given authority over monetary policy to the Federal Reserve to move the economy toward its long-run objectives. Congress then has expected the Federal Reserve to use monetary policy, virtually alone, to smooth the economic aberrations that have occurred.

Conflicts under such constraints are inevitable. Congress and the Federal Reserve would like to find a simple target toward which the instruments of monetary policy could be set so that the short-run problems would be minimized, the economic objectives obtained, and the need for unstabilizing discretionary action virtually eliminated. Monetarists like Milton Friedman and Leonall Andersen believe that a steady rate of growth in the money supply is the appropriate target. However, it may be more appropriate for Congress to give the Federal Reserve more authority and responsibility for the flow of money and credit throughout the entire economy by extending the Federal Reserve's control over nonmember banks and nonbank financial intermediaries. Moreover, Congress itself may have to pass unpopular economic legislation more quickly in order to assist monetary policy in the promotion of the general well-being. ■

INFLATION IN THE UNITED STATES

(Continued from page 174)

was an external restraint on the quantity of money.

8. The introduction of the Federal Reserve System in 1914 made a fundamental difference in the character of the inflation in World War I compared to the preceding episode. Under wartime conditions, the gold standard became an ineffective limit on the quantity of money, and though reestablished for a brief period in the 1920's, it never again played an important role in determining the monetary actions of

the Reserve System. In short, the system could intensify or offset at will external influences on the quantity of money.

Although the quantity of money about doubled in size from 1914 to 1920, the factors accounting for the rise differed (1) before United States entry into the war on April 6, 1917; (2) during the period of active United States participation in the war when government expenditures greatly exceeded tax receipts; and (3) during the price boom that occurred subsequently, when government receipts equaled or exceeded expenditure. During the period of United States neutrality, most of the change in the quantity of money was attributable to an increase in the United States gold stock; the belligerents paid for their purchases of American goods by shipping gold.

By adding to its portfolio of government securities, the Federal Reserve intensified the effect of the gold inflow. Our entry into the war brought a major change. Three-quarters of government expenditures from April, 1917, to June, 1919, were financed by Treasury borrowing and by money creation. The Federal Reserve served as the bond-selling window of the Treasury. Member banks made loans to their customers who used them to purchase government securities, and banks in need of reserves borrowed from the Federal Reserve banks, which paid out Federal Reserve notes and created Federal Reserve deposits on their books. In the post-armistice period, despite a net outflow of gold, the Federal Reserve continued to expand its credit outstanding; a rise in both the deposit-currency and the deposit-reserve ratios enhanced the effect of the increase in high-powered money on the rise of the quantity of money. Member banks were operating on borrowed reserves during this period, but the Federal Reserve hesitated to increase the discount rate, which would have had the effect of restraining bank borrowing. As a result, after the war ended, the Federal Reserve continued for 18 months to provide all the high-powered money demanded at an unchanged discount rate.¹⁴

Over the full period of World War I inflation, the quantity of money grew at a 13.6-percent annual rate, the effect of which was augmented by a rise in velocity at a 2.5-percent annual rate. Since output rose at more than 4 percent per year, the resulting price advance was at an 11.7-percent annual rate. The wholesale price index was the measure in earlier wars, hence the implicit price index for World War I gives results not directly comparable. The annual rate of the price rise in World War I measured by wholesale prices—14.6 percent—is greater than the price rise measured by the implicit price index but lower than in earlier wars.

9. The outbreak of war in Europe in September,

¹⁴ *Ibid.*, pp. 204-31.

1939, ushered in a period of inflation in the United States more protracted than the inflations that accompanied earlier United States wars. The quantity of money tripled, but the annual rate of increase was 12.6 percent, a percentage point lower than in World War I, while the rate of price rise, at 7.0 percent, was about three-fifths the rate in World War I. One striking difference was that velocity fell in World War II, apparently because the unavailability of consumer goods and restrictions on construction blocked channels of expenditures otherwise sought by consumers and firms. Accordingly, they were induced to increase their holdings of other assets—money and government securities. The decline in velocity and the accompanying rise in output explain why prices rose more slowly than the increase in the quantity of money.

As in World War I, the sources of the rise in the quantity of money differed in the period (1) of United States neutrality, September, 1939–November, 1941; (2) of wartime deficits, December, 1941–January, 1946; and (3) from the end of the war to the price peak in the third quarter of 1948. As in World War I, the growth of the quantity of money during the period of neutrality was attributable largely to the growth of the gold stock. In the period of United States participation in the war, an increase in Federal Reserve credit, as the system again became the bond-selling window of the Treasury, accounted for the rise in high-powered money and in the quantity of money. In World War II, however, it was not through lending to member banks that Federal Reserve notes and deposits increased; instead, the Federal Reserve bought government securities on its own account. These purchases served to increase bank reserves, which permitted a multiple expansion of bank deposits and Federal Reserve notes outstanding. The banks in turn also bought government securities directly.

In World War II, the Federal Reserve undertook to support the prices of government securities; in effect, it gave up control over the quantity of high-powered money. It had to create whatever quantity of high-powered money was necessary to keep the rates yielded by the securities from rising above a pattern that was established for different maturities. As in the corresponding period of World War I, the deposit-currency ratio declined; but its contractionary effect on the quantity of money was more than offset by a rise in the deposit-reserve ratio. Banks had no need to husband reserves since, given the support program, they could satisfy liquidity needs by holding income-yielding securities. In the final segment of the World War II episode, although the Federal Reserve continued the policy of providing all the high-powered

money demanded and although there was a gold inflow, the quantity of money grew at a markedly lower pace than in the earlier segments. Since the Federal Reserve surrendered control over the quantity of money by supporting the prices of government securities, the small rise was not a consequence of monetary policy designed to achieve that result. Paradoxically, the small rise reflected the public's willingness to hold relatively large amounts of money and government securities among its liquid assets. Had it tried to reduce its liquid assets, this action would have forced down the prices of government securities and raised their yields. The Federal Reserve would then have bought the securities to support their prices, raising high-powered money and the total quantity of money. The public's behavior suggested that it expected a postwar price decline, inducing it to hold larger real money balances than it otherwise would have.¹⁵

10. The inflationary episode after 1949 was not anticipated, even by professional economists. Instead, it was believed that the United States economy would return to the prewar condition of stagnation. The reality was prosperity and rising prices, sometimes at higher rates, as at the outbreak of the Korean War in 1950 when scare buying developed, sometimes at moderate rates during the rest of the 1950's and early 1960's, and since then, at rates unprecedented in the United States in peacetime.

As the discussion of the gold inflation of 1896–1914 (the last peacetime inflation before the current episode) implied, there are similarities and contrasts to be observed. The earlier episode lasted 18 years. The quantity of money grew at a 10.4-percent average annual rate, 1896–1903, and at a 5.9-percent annual rate, 1903–1914. If we compare the growth of money over the past 18 years of the current episode (which has already lasted more than 25 years), it averages 6.9 percent per year as against the earlier episode rate of 7.7 percent. But from 1957 to 1964, the average growth rate of money was 4.7 percent per year and, from 1964 to 1975, it was 8.3 percent per year. Although the growth rate of money on average over the past 18 years was lower than in the earlier episode, the rate of price rise in the current episode was 3.6 percent per year as against 2 percent per year earlier. In the current episode, the rate of price rise accelerated; in the earlier one, it decelerated over the period. In the current episode, real output grew at a slightly lower rate than in the earlier episode, and velocity since 1957 has been essentially unchanged, whereas it declined in the earlier episode. In this episode, the Federal Reserve has determined the growth rate of the quantity of money; in the earlier one, the growth rate was determined by the dictates of our adherence to the gold standard. Why then has the Federal Reserve countenanced high rates of

¹⁵ *Ibid.*, pp. 546–85.

growth of money? Fundamentally, the reason is that this is what the Federal Reserve believes the electorate wants.¹⁶

CONCLUSION

We have price data for this country since 1720. In the 255 years that have elapsed, about half the time prices were advancing at an inflationary rate and about half the time they were either stable or falling. There is a widespread belief that prices have always been rising. But this was not true of the American experience before World War II when a rise in the price level was followed by a downward movement. Only since World War II has there been an upward shift in the price level that at this writing seems to be permanent. A study of inflationary episodes indicates that they occur when the quantity of money rises at a rate in excess of the growth of real output. The way to end inflations, earlier experiences teaches us, is to

¹⁶ On the current episode, see Phillip Cagan, *The Hydra-Headed Monster* (Washington, D.C.: American Enterprise Institute for Public Policy Research, October, 1974). An increase in the growth rate of the quantity of money is initially accompanied by a rise in the growth of real output and an increase in employment. Only at a later date are there undesired inflationary price effects. Correspondingly, the restriction of the growth of the quantity of money to halt the advance of prices or to slow their rate of advance is initially accompanied by a decline in the growth of real output and an increase in unemployment. Only at a later date are the desired price effects realized. Starting an inflation entails popular intermediate effects; halting an inflation entails unpopular intermediate effects.

reduce the rate of monetary expansion and in addition, if possible, raise the rate of the growth of real output. ■

THE FEDERAL ROLE

(Continued from page 182)

(perhaps) the mid-1970's have overall federal tax, spending and monetary policies been designed along lines of macroeconomic policy objectives. These objectives, as noted earlier, have often been frustrated by military priorities. Much of the non-defense spending has occurred as our society has grown, has become more urbanized, and has changed in structural characteristics. The growing social security program, health care programs, and child-related welfare programs can be attributed to (1) the large population growth in the non-labor force, and (2) the movement away from extended family and family care for young and old toward the nuclear family, with more government care for young and old. It may be that social welfare spending, rather than defense spending, will dominate over the next 50 years, especially as the non-working percentage of our population grows. The deficit will probably be large in the last half of the 1970's as the government tries to make amends for its fiscal and monetary misactions of the last decade (1965-1975). In the absence of another major, costly war, one might expect the role of the government in the economy to continue at about the same pace as it has since World War II. ■

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THE AMERICAN ECONOMY: AN OVERVIEW

(Continued from page 164)

percent for the remainder of the decade even if growth in GNP averaged 5 or 6 percent. It would be necessary to shift away from heavy reliance on foreign-produced oil to other, more costly, energy sources. It was feared that there would be bottlenecks in capital-short key industries, and that it would be expensive to comply with newly legislated standards for environmental protection, safety for consumers and workers, and affirmative action for equal opportunities in employment. Other policy makers worried about the "catch-up" wage and price increases that unions and business firms with concentrated market power were likely to seek.

Fiscal and monetary authorities must select that degree of expansion of work and spending that will stimulate the economy enough to induce a recovery of employment and production, but will not set off another round of double-digit inflation. Some see the key to this conundrum in policies that emphasize saving and investment and restrain government spending. Others see the solution in vigorous antitrust and other efforts to reinstate competition in the marketplace. Still others emphasize the need to protect the income of those most seriously affected by recession and inflation by such devices as price controls, selective credit policies, consumer subsidies and rationing, guaranteed minimum incomes, indexation of income taxes and cash transfers, and large-scale public service employment. If past experience with severe economic difficulties is any guide, there will be some change in the economic role of the government in the near future.

The American economy performed well through most of the years since 1947. Total production more than doubled and per capita consumption nearly doubled in this period. This was accomplished by maintenance of a moderate 15 percent investment ratio and by strenuous restructuring of the economy with massive shifts of labor and other resources from one industry to another. Throughout this period, the role of government widened, as is indicated by the rise in taxes from 25 to 32 percent of the GNP.

Inequalities of pre-tax money income and of personal wealth remained virtually unchanged in the period under review in spite of remarkable changes in the economy and the social order. On the other hand, there was some narrowing of certain intergroup differences in income, most notably the black-white income difference. Moreover, the number of persons counted as "income poor" was reduced drastically during the 1960's and now stands at 12 percent of the population. The latter trend was forwarded by the strong growth of social welfare expenditures, which now equal 18 percent of GNP.

The unusual combination of inflation and declining production in 1974 and 1975 presents a serious challenge to the American political economy. The challenge is to ease the burden of unemployment and declining real income and to engineer a recovery without renewing high rates of inflation. The nation approaches its challenge with a highly trained labor force, an enviable stock of natural resources and man-made wealth, and competent managers and technologists. How well the nation performs in meeting this challenge will influence the life chances of the next generations of Americans as well as many others around the world. ■

FINANCING STATE AND LOCAL GOVERNMENTS

(Continued from page 188)

equalization of tax capacities have forced state governments to play a greater role.

State aid payments grew from \$11.8 billion in 1963 to \$40.0 billion by 1973, a 13 percent average yearly increase. The level of aid varies widely by state, and distribution of the aid is accomplished under widely varying systems. While the relative role of state governments in providing all types of services is an important issue, the area that received the most attention in recent years has been the question of the state role in financing elementary and secondary school education.

Financing Public Education. Large disparities in taxing and spending levels required for schools result primarily because school financing, left to local governments, has relied on local property taxes. The unequal distribution of property wealth per pupil among local districts has produced great inequities in educational expenditure in local areas: areas with low property wealth had below average expenditures per pupil, even with higher than average tax rates. The resulting inequities have come under legal scrutiny of late, and in at least nine states courts have ruled that educational financing systems resulting in large discrepancies in expenditures per pupil violate the equal protection clauses of state constitutions. The first such case was the 1971 California decision, *Serrano v. Priest*. In the only case to reach the Supreme Court, *Rodriguez v. San Antonio Independent School District* (411 U.S. 1 [1972]) the court ruled that education did not represent a "fundamental interest" under the federal constitution, but allowed state constitutions and statutes to declare disparities in educational financing unconstitutional. These legal pressures have stimulated an increasing role for state governments in financing local education expenditures through state aid programs relying on equalizing formulas.

Recent proposals for "power equalization" formulas would ensure equal tax capacities for every local dis-

strict. A given tax rate would be required to raise a given amount of revenue per capita: when a tax rate yielded too little, the state would make up the difference, but when the tax rate brought in excess revenues, the excess would go to the state.³³ Such a plan would allow individual localities the freedom of determining their own tax rates and thus their own level of expenditures, but would still provide for equal opportunity. However, political problems associated with the negative tax aspects combined with the dilemma of raising sufficient state funds make such formulas difficult to enact.

In spite of an expanded state role, the effectiveness of power equalization formulas has been limited.

State and local governments face increased fiscal pressures because of rapidly escalating expenditures. Their revenue-raising capacity has not expanded accordingly. Several alternatives are open to these governments as they seek solutions to the mounting gap between their expenditures and revenues. First, they must introduce more growth-responsive sources of revenue. Second, they must maintain close control over expenditures and reduce costs if possible. Finally, because the financing gap stems largely from structural weaknesses, with state revenue-raising capacity still insufficient to finance needed expenditures, higher levels of government must assume a greater role. ■

³³ See John Coons, et al., *Private Wealth and Public Education* (Cambridge: Harvard University Press, 1970) for a full discussion of power equalizing formulas.

THE ROLE OF THE AMERICAN CORPORATION

(Continued from page 178)

Table 5 shows that since 1950, national income has risen 373 percent, and compensation to employees has risen 453 percent, but inventory-adjusted profits for non-financial corporations are up only 123 percent. Yet the Opinion Research Corporation found that 66 percent of the public believes that companies could raise wages without raising prices.

"It is surely one of the wonders of this remarkable age that any significant number of people could seriously entertain the idea that the road to Utopia runs through corporate treasuries," says John E. Swearingen, board chairman of Standard Oil of Indiana. "This is on a par with believing in the tooth fairy."

JOBS AND THE PROFIT SQUEEZE

If there is misunderstanding about the level of corporate profits, there is even greater misunderstanding about the uses made of profits. The profit figures in Table 5 are *before* taxes. But, the first thing corporations do with profits is pay taxes. Next, they pay dividends. Over the last three years, corporations

Table 5: Shares of National Income
(in billions current \$'s)

Year	National Income	Compensation of Employee	% Share	Adjusted Corporate Profits*	% Share
1950	\$241.1	\$154.6	64.1%	\$33.3	13.8%
1955	331.0	224.5	67.8	41.0	12.3
1960	414.5	294.2	70.9	40.3	9.7
1965	564.3	393.8	69.7	64.0	11.3
1970	800.5	603.9	75.4	50.9	6.3
1974	1,142.5	855.8	74.9	74.3	6.5
% Change					
1950-1974	+373.8%	+453.5%		+123.1%	

* Pretax profits for non-financial corporations with inventory evaluation adjustment.

Source: Department of Commerce, *Business Conditions Digest and Survey of Current Business* (Washington, D.C.: U.S. Government Printing Office).

have retained on average only about 35 percent of pretax profits.

These retained profits are usually plowed back into the business. Individuals rarely consider the investment that must be made in equipment, plant, inventories, and working cash on a per employee basis. The average cost of this "tool kit" for *each* employee working for the nation's 500 largest industrial corporations is \$41,200. Thus, for their 15.2 million employees, these companies invested about \$628.6 billion. The investment needed to create a new job varies by type of industry, depending on the technology involved and other circumstances (see Table 6).

Table 6: Assets and Sales Needed per Employee

	Assets Needed per Employee	Sales Needed per Employee
500 Largest Industrials	\$41,200	\$54,667
2nd 500 Largest Industrials	30,951	40,616
50 Largest Retailers	16,034	41,236
50 Largest Utilities	128,091	43,128
Tobacco Industry	81,489	66,106
Publishing Industry	33,633	41,447
Textile Industry	20,303	28,765
All Industries—median	33,658	42,600

Note: Average figures used for broad categories, median for the individual industry groups.

Source: *Fortune Magazine*, May, 1975.

The corporate sector faces not only the problem of finding capital to create new jobs but also the problem of finding capital to modernize present plants so they can remain competitive with the rest of the world. In the last 25 years, the United States economy has grown at only two-thirds the pace of West

Europe and Japan; and in the same time, its share of world exports has declined from 16 percent to 12 percent.

"We've let the engine of this great productive country get rusty," says Treasury Secretary William E. Simon. "Equipment is becoming obsolete, and many industries are short of capacity." He supports his case with studies that show that the United States business investment averaged only 13.6 percent of GNP per year versus 29 percent in Japan, 20 percent in West Germany, and 18.2 percent in France for the 1960-1973 period. During that same time, growth rates of output per man hour and real GNP for the United States were at or near the bottom.

Table 7: Comparative Business Investment & Growth Rates

	1960-1973 Business Investment as % GNP	1960-1973 Growth Rates	
		Output/ Manhour	Real GNP
Japan	29.0%	10.5	10.6%
West Germany	20.0	5.8	4.7
France	18.2	6.0	5.8
Canada	17.4	4.3	5.4
Italy	14.4	6.4	5.4
United Kingdom	15.2	4.0	2.9
United States	13.6	3.3	4.3

Source: Secretary Simon's statement to Senate Finance Committee, May 7, 1973.

Secretary Simon lists several factors that account for the decline—the emphasis in the United States on personal consumption and government spending as opposed to savings and capital formation, the portion of our investment that goes to service industries rather than to productive industries, the large share that must go for replacement and modernization and not for additional capacity, the decline in corporate profits since the mid-1960's, and various tax laws that affect corporate depreciation rates, including double taxation of corporate dividends.

THE CAPITAL GAP

If the immediate past has been discouraging, the immediate outlook is not much better. In the past decade, United States outlays for non-governmental fixed investment totaled \$1.5 trillion, about two-thirds of it in the corporate sector. Secretary Simon estimates that a normal rate of economic expansion will call for about a \$3.4-trillion business investment in the 1974-1985 period. If private housing is added, the figure will exceed \$4.0 trillion. In short, corporations will need about three times more capital in the coming years than they have in the past.

A study by the New York Stock Exchange estimates that, under present conditions, there will be a

capital shortage of between \$600 billion and \$800 billion between 1975 and 1985. If the corporations cannot close the gap, it will mean increased shortages, higher prices, and higher unemployment.

Corporations use both internal and external sources for their capital needs. Internally, money for expansion can come from retained profits and depreciation allowances. Externally, additional capital is raised primarily through borrowing and the sale of additional equity.

The percentage share of the capital needs corporations generate internally has been shrinking in recent years as profits have been squeezed and allowances for depreciation, never generous when compared with those of other industrial countries, have become obsolete in the context of higher inflation rates. The rate of capital recovery allowed under United States depreciation rules is the slowest in any major industrial country. Write-offs in other industrial nations in the first three years typically are from 30 percent to 100 percent larger than in the United States.

Thus, corporations depend more and more on external sources. In the mid-1960's, less than one-third of corporate capital needs were financed with borrowed money. Today, more than half the capital expenditures come from money borrowed from banks or from the sale of bonds.

With interest rates at all-time highs, a *Catch-22* situation has developed. The more corporations borrow, the more interest they pay, and thus the lower their profit margins. As corporate debt levels have risen, their liquidity (the relationship of their cash and other liquid assets to total liabilities) has worsened dramatically. Furthermore, the coverage of interest payments by earnings has shrunk from as high as 13 times interest charges in the 1960's to around 3 times today.

When investors look at these deteriorating ratios, they are reluctant to buy more common stock. This usually means that a corporation must rely on another round of selling bonds or must borrow more money from the banks. At some point, this is too costly or it is impossible. Many corporations that believe they have the products and the talents to create new jobs are unable to raise all the capital that they need.

Secretary Simon's proposals to Congress for solving capital shortages in the next decade include several items that are directly related to corporations. One suggestion is to change our two-tier system of corporate taxation, in which income is taxed once at the corporate level and again at the shareholder level. This tax discriminates against corporate investors generally and against small equity investors particularly. An individual in the 20 percent tax bracket in effect pays 48 percent at the corporate level and then an additional 20 percent of what is left, for a

total tax burden of 58.4 percent, or nearly three times his individual rate.

Secretary Simon believes that the integration of personal and corporate income taxes would encourage more equity investment. In a closely related proposal, he suggests that the capital gains tax paid by investors should be reduced or eliminated. Both these proposals, he argues, would shift money from consumption into savings and thus would produce the capital needed to expand the economy.

For corporations, Secretary Simon made a number of proposals: first, that depreciation rates be liberalized so they match those of competing industrial nations; second, that the discriminatory aspects of the investment tax credit be eliminated to benefit a broader base of corporations; third, that serious consideration be given to reducing the rate of corporate tax.

Politically, at least today, his proposals are not given much chance of success. In the context of a general public that completely misunderstands the importance of profits and how profits are used to create jobs, politicians find it more expedient to make headlines with charges of "obscene profits."

CONCLUSIONS

The corporate sector has dominated the United States economy during its explosive growth in this century. Now, however, the corporate sector is in trouble. It faces a decade in which it must raise nearly \$4 trillion if it is going to help the nation's economy grow at a normal rate; yet there is evidence that it will miss the capital-need target by \$600 to \$800 billion. Treasury Secretary Simon, on behalf of the Ford administration, has made several proposals for changes in the tax laws that would benefit both corporations and investors by giving incentives for saving rather than consumption. But the changes are not politically appealing, and may never come about.

The alternatives are not attractive. If corporations fail to raise the capital, growth in American productivity could slow even more; prices could rise; and our standard of living could be reduced. If we turn the job of increasing productivity over to the government, as many critics of the corporations seem to suggest, we move toward statism, whose recent record in the world market place is questionable. ■

ENERGY SHOCK: OIL AND THE ECONOMY

(Continued from page 191)

looked like if there had been no OPEC price increase?" To answer it, the model was run with all historical input data as they actually were, with the exception of energy prices, which were held stable.

Energy price changes were introduced into the DRI model via the Wholesale Price Index (WPI) component for energy. The rate of increase for this component of the WPI was held to 7.2 percent per year. The actual rate of increase was, of course, much higher. The 7.2 percent figure was estimated to be the early 1970's trend in energy price increases prior to the embargo. The results of the simulation of how key macro-variables would have behaved without energy shock are compared with actual historical data below on a key variable basis.

Current dollar GNP, unadjusted for inflation, was the first variable examined. Table 2 compares actual GNP with forecast GNP under energy price assumptions spelled out above. Note that this estimate implies that, without OPEC cartel energy price increases, current dollar GNP would have been over \$100 billion higher (7 percent above actual) than it, in reality, was. This represents lost GNP due to the impact of higher energy prices.

Table 2: Current Dollar GNP (bil. \$/yr) With/Without Energy Price Increases

Quarter	With Price Increase	W/O Price Increase	% Lost
4-1973	1344	1354	.76
1-1974	1359	1370	.81
2-1974	1384	1386	.17
3-1974	1416	1421	.33
4-1974	1431	1458	1.90
1-1975	1416	1489	5.10
2-1975	1440	1541	7.04

Source: Actual data from Commerce Department. Simulated data derived from the Data Resources Inc., Lexington, Mass., model.

Real GNP, adjusted for inflation and stated in constant 1958 dollars, gives a more accurate picture of economic performance, especially during periods of inflation. Table 3 compares actual data simulated on the basis of the above energy price assumptions.

Table 3: 1958 Dollar GNP (Bil. \$/yr.) With/Without Energy Price Increase

Quarter	With Price Increase	W/O Price Increase	% Lost Due To Price Increase
4-1973	846	855	1.1
1-1974	831	851	2.4
2-1974	827	851	2.9
3-1974	823	858	4.2
4-1974	804	867	7.8
1-1975	780	874	12.0
2-1975	783	895	14.2

Source: Actual data from Commerce Department. Simulated data derived from the DRI model.

Table 4 contains a tabulation of estimated unemployment compared with actual unemployment. Note that by the second quarter of 1975, as the

lagged effects of energy shock are worked out, unemployment would have been 3.8 percentage points lower than it actually was. This implies that about 3.5 million more people would have been employed without the energy shock of OPEC price increases.

Table 4: Unemployment Rate With/Without Energy Price Increase

Quarter	With Price Increase	W/O Price Increase	% Points Due To Price Increase
4-1973	4.8	4.4	0.3
1-1974	5.2	4.6	0.6
2-1974	5.1	4.8	0.3
3-1974	5.5	5.0	0.5
4-1974	6.6	5.2	1.4
1-1975	8.4	5.2	3.1
2-1975	8.9	5.1	3.8

Source: Actual data from Commerce Department. Simulated data derived from DRI model.

Perhaps the most important variable examined here is the general price level. The broadest measure of price levels and changes is the GNP deflator, a price index which represents virtually all goods and services bought and sold. In Table 5, we have estimated what this price index would have been without energy price increases.

Table 5: GNP Deflator With/Without Energy Price Increases

Quarter	With Price Increase	W/O Price Increase	% Increase Due To Energy Prices
4-1973	158.9	158.4	0.3
1-1974	163.6	161.1	1.6
2-1974	167.3	162.9	2.7
3-1974	172.1	165.6	3.9
4-1974	178.0	168.2	5.8
1-1975	181.6	170.4	6.6
2-1975	183.9	172.3	6.7

NB. 1958 = 100

Source: Actual data compiled by Commerce Department. Simulations from DRI model.

Generally speaking, the nation's broadest price measure would be 6.7 percent lower had it not been for energy price increases.

While these estimates give the appearance of mathematical precision, it should be emphasized that this is indeed not the case; the simulations provide only rough estimates. Moreover, the model is in an evolutionary state and is therefore subject to frequent changes. Reproduction of these estimates may therefore be impossible. Nevertheless, the data generated here provide some estimates of the impact of the energy shock. They represent the first attempt at separating energy shock from other economic developments as a recession/inflation causal factor.

Given the estimate that the total effect of energy shock was to raise the GNP deflator 6.7 percent, the dollar value of energy shock inflation was 6.7 percent of the current dollar GNP of \$1440 billion (annual rate), or \$96.5 billion, in the second quarter of 1975.

This represents the total inflationary impact after most lags are worked out. It is composed of the primary inflationary component plus ripple.

With the increase in energy prices themselves at \$49 billion, we can say that the ripple factor is $\frac{\$96.5 \text{ bil.}}{\$49 \text{ bil.}}$ or about 2.0. By multiplying the amount of the primary energy price increase by this 2.0 factor, the total macroeconomic impact can be estimated at the end of the approximately six quarters necessary to calculate the full impact as the economy's lags are overcome.

Over the next several years, the need for price controls on fossil fuels, the pricing of electricity, and the tax treatment of all fuel sources will be the subject of much attention. Energy price inflation has had a far-reaching impact on the nation's gross national product, on employment and on prices—an impact much stronger than might be expected from the size of the energy price escalations themselves. Future increases in the price of energy may have the same sort of impact on the economy. ■

BOOK REVIEWS

(Continued from page 193)

selves to the problem of worldwide inflation, analyzing the United States impact on the world economy. Their papers were originally presented to a conference at the Hoover Institution on War, Revolution and Peace in Washington, D.C., in May 1974. The book includes comments by the participants on the papers presented.

INTERRELATIONSHIP OF INFLATION/RECESSION, THE INTERNATIONAL FINANCIAL STRUCTURE, AND ALLIANCE SECURITY. Center for Strategic and International Studies. (Washington, D.C.: Georgetown University, 1975. 53 pages.)

THE NEW POLITICAL ECONOMY. BY BRUCE L. R. SMITH. (New York: Halsted Press, 1975. 335 pages and index, \$20.00.)

THE ECONOMIC DEVELOPMENT OF THE THIRD WORLD SINCE 1900. BY PAUL BAIR-ROCH. (Berkeley, Calif.: University of California Press, 1975. 210 pages, notes, appendix, bibliography, index, \$12.00.)

MISCELLANY

WASHINGTON INFORMATION DIRECTORY, 1975-1976. EDITED BY PATRICIA ANN O'CONNOR. (Congressional Quarterly, Inc., New York: Quadrangle, 1975. 802 pages, subject index, \$7.95, paper.)

A comprehensive directory of government and nongovernment agencies indexed by subject.

THE MONTH IN REVIEW

A CURRENT HISTORY chronology covering the most important events of September, 1975, to provide a day-by-day summary of world affairs.

Cyprus Crisis

Sept. 14—U.N. Secretary General Kurt Waldheim postpones the opening session of the 4th round of peace talks between Greek Cypriote and Turkish Cypriote representatives. The 2 sides cannot agree on proposals for negotiation.

European Economic Community (EEC)

(See *China*)

Middle East

(See also *U.S., Foreign Policy*)

Sept. 1—In separate ceremonies in Jerusalem and Alexandria, Israeli and Egyptian representatives initial a new agreement that provides for Israeli withdrawal from parts of the occupied Sinai. Israeli forces will withdraw along the length of the Mitla and Gidi passes and will return the Abu Rudeis oilfields to Egyptian control in return for modest concessions by Egypt, which will permit nonmilitary cargoes to or from Israel to pass through the Suez Canal. The two sides pledge to use peaceful and not military means to solve the conflict in the Middle East. A key section of the accord calls for an early warning system in the Sinai, entrusted to the U.S. and operated by U.S. civilians. U.S. Secretary of State Henry Kissinger has initialed this part of the pact, which must be approved by the U.S. Congress.

Sept. 3—U.S. Secretary of State Kissinger returns to Washington, D.C.

The Israeli Knesset (Parliament) votes 70 to 43 to approve the interim agreement with Egypt.

Sept. 4—Meeting in Geneva, Israeli and Egyptian representatives sign the new interim peace agreement. U.S. and U.S.S.R. representatives do not attend the ceremony.

Sept. 5—*Al Baath*, the newspaper of Syria's ruling Baath Socialist party, criticizes Egyptian President Anwar Sadat for the Israeli-Egyptian agreement, which it terms "strange and disgraceful."

Sept. 10—Egyptian and Israeli delegates begin meetings in Geneva to discuss the specific details needed to implement the new agreement.

Sept. 17—Speaking in Washington, D.C., Israeli Defense Minister Shimon Peres asks the United States for missiles like the U.S. Lance and Pershing types

for battlefield support. Peres is in Washington, D.C., to talk to Secretary of State Kissinger and U.S. Defense Secretary James Schlesinger.

Sept. 18—Israeli forces begin clearing minefields around Sudr in preparation for their withdrawal from the Sinai.

Sept. 23—Meeting in Geneva, Israeli and Egyptian negotiators complete a document detailing Israel's next troop withdrawal in the Sinai. Egyptian representatives sign the agreement; the Israelis, under instruction from their government, initial it but will not sign it until the U.S. Congress approves stationing American monitors in the Sinai buffer zone.

The U.S. Senate Foreign Relations Committee delays recommending congressional approval of U.S. monitors for the Sinai until all secret documents relating to the recent Israeli-Egyptian accord are made public by the administration.

Sept. 24—Prince Saud Ibn Faisal, the minister of state for foreign affairs of Saudi Arabia, says that the Palestinians will have to be consulted in further steps for Middle East peace; he declares that "continuing to disregard their [the Palestinians] legitimate views will not help the cause of peace."

Organization of Petroleum Exporting Countries (OPEC)

Sept. 19—In an interview broadcast in Copenhagen, the Shah of Iran says his country will demand only a 15 percent maximum rise in oil prices at the meeting of OPEC ministers in Vienna on September 24.

Sept. 23—The Shah of Iran discloses plans for a program of special aid to the least developed nations from the oil-producing nations.

Sept. 24—OPEC ministers begin meetings in Vienna to decide on a price increase for their oil; Saudi Arabian Petroleum Minister Sheik Ahmed Zaki Yamani tells interviewers that he favors an extension of the present 9-month price freeze or a modest increase in price of 5 percent or less.

Sept. 27—The 13 OPEC foreign ministers agree on a 10 percent increase in the price of oil sold by OPEC nations, effective October 1; they also agree that there will be no further oil price increases for at least 9 months. In the U.S., the OPEC price rise is expected to boost the cost of gasoline some 1¢ to 1.5¢ per gallon.

Southeast Asian Treaty Organization (SEATO)

Sept. 24—The foreign ministers of SEATO meet in New York and agree that in view of the end of the war in Indochina the organization should be phased out "in an orderly and systematic manner."

United Nations

(See also *Intl, Cyprus Crisis; U.S.S.R.; U.S., Foreign Policy*)

Sept. 1—The United Nations opens a special session that will concern itself with the problems of third world countries and their relations with the richer nations, largely in the fields of economics and development.

Sept. 16—The special session of the U.N. General Assembly ends with the adoption of principles and recommendations for "redressing the economic imbalances in the world."

The U.N. General Assembly opens its 30th session; Luxembourg's Premier Gaston Thorn is elected president; 3 new states, Cape Verde, São Tomé and Príncipe, and Mozambique, are admitted to membership. They are all former Portuguese colonies.

Sept. 19—A group of Arab countries pledges \$25 million to the United Nations Educational, Scientific and Cultural Organization (UNESCO) to replace the \$22.5-million United States contribution withheld by U.S. congressional action because UNESCO expelled Israel.

Sept. 30—In the Security Council, the U.S. votes against the admission of North and South Vietnam to membership in the U.N. The vote is 14 to 1 in favor of admission.

ARGENTINA

Sept. 13—President Isabel Martínez de Perón begins a 45-day leave of absence. Senate president Italo Luder is sworn in as interim President.

Sept. 17—In Buenos Aires, the intelligence chief of the defense ministry is shot to death by terrorists.

AUSTRALIA

(See *Papua New Guinea*)

CAMBODIA

Sept. 9—Returning after 5 years in exile in China, Head of State Prince Norodom Sihanouk arrives in Phnom Penh. He is met at the airport by Deputy Premier Son Sen.

Sept. 12—Prince Sihanouk calls his first Cabinet meeting in 5 years.

CHILE

(See *U.S., Political Scandal*)

CHINA

Sept. 8—A top-level, 10-man trade delegation arrives in Washington, D.C., on a 4-day visit. It is expected to meet with U.S. President Gerald Ford and leaders in the U.S. Congress.

Sept. 15—In Brussels, government representatives formally establish diplomatic relations with the European Economic Community.

Sept. 23—Hsinhua, the government press agency, announces the release of the remaining 144 imprisoned infiltrators from Taiwan, who were captured between September, 1962, and September, 1965.

COLOMBIA

Sept. 26—The government announces that beginning in 1976 it will no longer be a recipient of U.S. foreign aid. Colombia is the first Latin American country to relinquish U.S. aid.

ECUADOR

Sept. 1—President Guillermo Rodríguez Lara foils an attempted coup d'état led by the army chief of staff, General Raul González Alvear. 12 people are reported killed and 80 are wounded.

General González and his brother-in-law, General Alejandro Solís, director of the Military College, are taken prisoner.

Sept. 5—It is announced that 14 senior military officers will be tried by a 5-man military tribunal on charges of conspiring to overthrow the government.

EGYPT

(See also *Intl, Middle East*)

Sept. 15—In Madrid, the Egyptian embassy is seized by 5 Palestinian guerrillas, who demand that Egypt break the disengagement agreement with Israel. They threaten to blow up the embassy and kill the ambassador and 2 assistants whom they are holding hostage.

In a televised speech in Cairo, President Anwar Sadat refuses to grant the terrorists' demands. He accuses the Soviet Union of turning Arab factions against the agreement. He agrees to allow the guerrillas to fly with their hostages to Algiers.

Sept. 17—The Egyptian ambassador returns to Madrid after his release by the Palestinian guerrillas. He credits Palestinian Liberation Organization leader Yasir Arafat with arranging for his release.

ETHIOPIA

Sept. 3—Heavy fighting reportedly continues between government troops and separatists in the northern province of Eritrea.

Sept. 13—In Eritrea, a U.S. Navy communications base is attacked; 2 Americans and 6 Ethiopians are reported missing; 9 civilians are killed and 23 are injured.

Sept. 15—In Lebanon, Eritrean rebels threaten to kill 4 American hostages (2 of whom were kidnapped July 14) unless the U.S. government stops providing the Ethiopian military government with arms and ammunition.

FINLAND

Sept. 22—Incomplete returns from a 2-day election that ends today show little change in the political distribution in Parliament among the 12 parties.

FRANCE

Sept. 4—President Valéry Giscard d'Estaing announces a new \$7-billion government spending program intended to bolster the economy.

Sept. 11—Premier Jacques Chirac announces the imposition of an import tax on inexpensive Italian wines.

GERMANY, FEDERAL REPUBLIC OF (West)

(See also *U.S., Military*)

Sept. 28—In state elections in Bremen, the Social Democrats receive 49 percent of the vote; they have suffered a loss of 6 percent since 1971. The Free Democratic party wins 13 percent of the vote, increasing from 7 percent in 1971.

INDIA

Sept. 15—In New Delhi, a high court rules that the arrest and imprisonment of a prominent Indian journalist are unlawful. The court says that the government must state specific charges in order to arrest critics of the government.

Sept. 19—The Supreme Court postpones its ruling on Prime Minister Indira Gandhi's appeal against her conviction in June of violating the election law.

IRAN

(See *Intl, OPEC*)

ISRAEL

(See also *Intl, Middle East*)

Sept. 20—Foreign Minister Yigal Allon informs Syria that Israel will not interfere in the internal affairs of Lebanon as long as the dispute is confined to the Lebanese.

Sept. 25—An unofficial delegation of left-wing politicians arrives in Moscow to discuss the possibility of renewing diplomatic relations between Israel and the U.S.S.R.; relations were broken off during the 1967 Middle East war.

Sept. 28—The government devalues the pound by 10 percent and increases purchase taxes some 5 to 10 percent.

ITALY

(See *France*)

JAPAN

Sept. 16—Premier Takeo Miki presents a \$6.7-billion anti-recession government spending program to Parliament for approval.

Sept. 30—Emperor Hirohito and Empress Nagako arrive in Williamsburg, Virginia. This is the 1st visit to the United States by any Japanese Emperor. Hirohito is expected to meet with President Gerald Ford on October 2.

JORDAN

(See *U.S., Foreign Policy*)

KOREA, REPUBLIC OF (South)

Sept. 6—The Seoul district court sentences 4 Christian missionaries to 6 to 10 months in jail. They have been found guilty of using mission money to aid opponents of President Park Chung Hee's government last April.

LAOS

Sept. 5—Prince Souvanna Phouma announces his plans to step down as Premier after the April, 1976, general elections for a National Assembly.

Sept. 29—In Vientiane, demonstrators protest the takeover of the coalition Cabinet by pro-Communist Pathet Lao. This is the 1st protest since the Pathet Lao assumed complete control in August, 1975.

LEBANON

(See also *Israel; Libya*)

Sept. 7—In Tripoli, 12 passengers are forcibly taken from a bus and shot to death by gunmen from Zgharta (a neighboring town which is primarily Maronite Christian—an eastern sect of the Catholic Church).

Sept. 8—In Tripoli, street fighting between the Muslims and Maronites brings the death total to 31 since fighting began September 3.

Sept. 10—Premier Rashid Karami orders troops to form a buffer zone between the warring Christians and Muslims. Also, he announces that army commander Major General Iskandar Ghanaem has been replaced by Major General Hanna Saed.

Sept. 12—Calm is reported in Tripoli as government troops separate the 2 factions.

Sept. 15—Fighting between Muslims and Christians spreads to Beirut. 7 people are reported killed by sporadic bursts of gunfire.

Sept. 20—Syrian Foreign Minister Abdel Halim Khaddam confers with the rival groups and reports that a cease-fire has been agreed to by all the parties involved.

Sept. 24—Premier Karami announces the formation of a 20-member committee to seek a peaceful solution to the fighting. He also announces a new

cease-fire, to take effect at 5 p.m. The week-long fighting has brought the death total to 225 people, with more than 350 people wounded. Areas of Beirut have been extensively damaged.

LIBYA

Sept. 12—U.S. State Department officials report that Colonel Muammar el-Quaddafi's government has sent "tens of millions of dollars" to Lebanon in support of the Muslims.

MALAYSIA

Sept. 21—Al-Sultan Yahaya Petra ibni Al-Marhum Sultan Ibrahim is sworn in as Paramount Ruler for 5 years.

MEXICO

Sept. 23—The Institutional Revolutionary party names Finance Minister José López Portillo as its presidential candidate to succeed President Luis Echeverría Alvarez when he retires in December, 1976.

NIGERIA

Sept. 12—The new military government dismisses 102 federal officials, bringing the total number of dismissed state and federal employees to over 300 since the military coup in July.

NORWAY

Sept. 27—Premier Trygve Bratteli reiterates the government's intention to limit oil production from the North Sea to around 15 percent of the country's gross national product.

PANAMA

Sept. 23—Demonstrators stone the American embassy in Panama City, demanding that the U.S. pull its troops out of the Canal Zone.

PAPUA NEW GUINEA

Sept. 16—Papua New Guinea, a colony of Australia since 1906, becomes independent.

PERU

Sept. 2—President General Francisco Morales Bermúdez names Luis Barua Castanada, a civilian, to serve as minister of economy and finance. He is the 1st civilian to serve in the Cabinet in 7 years.

POLAND

Sept. 22—The U.S. government places a temporary embargo on grain shipments to Poland until a long-term agreement between the U.S. and the U.S.S.R. is negotiated.

PORTUGAL

Sept. 1—Air Force Chief of Staff General José Morais da Silva voices his opposition to allowing

the Communist-supported former Premier Vasco Gonçalves to serve as chief of staff of the armed forces.

Sept. 2—Army Chief of Staff General Carlos Fabiao states his opposition to the appointment of Gonçalves.

Sept. 3—Delegates to the army's general assembly vote overwhelmingly in favor of opposing Gonçalves's appointment.

Sept. 5—General Gonçalves resigns from his position as chief of staff of the armed forces. President Francisco da Costa Gomes removes Gonçalves from the High Council of the Revolution, stripping him of all responsibility.

Sept. 13—Brigadier General Eurico Corvacho, a pro-Communist supporter of Gonçalves, is removed as head of the northern military region.

Sept. 19—A coalition Cabinet, led by Vice Admiral José Pinheiro de Azevedo, is sworn in by President Costa Gomes. The new Cabinet includes 5 military officers, 4 Socialists, 2 Popular Democrats, 1 Communist, and 3 civilians.

Sept. 24—*The New York Times* reports that the U.S., the U.S.S.R., and China are channeling money and ammunition to Portugal and Portuguese Angola. The East European countries and the U.S.S.R. have reportedly sent between \$50 million and \$100 million to Portugal since April, 1974.

Sept. 25—In Lisbon, 3,500 soldiers demonstrate against what they consider to be a move toward the right by the coalition Cabinet.

Sept. 26—A "military intervention force" is formed to support the new coalition Cabinet. General Costa Gomes, commander-in-chief of the armed forces, will head the new group.

Sept. 29—Premier Azevedo orders government troops to take over radio and television studios controlled by Communists.

Portuguese Territories

ANGOLA

Sept. 2—The U.S. government agrees to provide 2 chartered planes to help evacuate civilian refugees.

Sept. 19—The Portuguese government announces that it will withdraw Portuguese troops by November 11, the day scheduled for independence.

TIMOR

Sept. 8—Officials of the left-wing Revolutionary Front for an Independent East Timor (Fretilin) claim control of the Pacific colony. They drop their demand for immediate independence from Portugal.

Sept. 17—Indonesia warns of possible retaliation if left-wing military incursions from Timor continue in Indonesian territory.

RHODESIA

(See also *U.S., Legislation*)

Sept. 28—After a factional dispute, Joshua Nkomo, former head of the defunct Zimbabwe African Peoples Union, is elected president of the African National Council, which is negotiating for the Rhodesian black majority.

SAUDI ARABIA

(See *Intl, Middle East, OPEC*)

SPAIN

Sept. 12—3 left-wing extremists are sentenced to death by a military court for killing a policeman. They are appealing the decision.

Sept. 19—In separate police actions in Madrid and Barcelona, 2 Basque nationalists are killed and 18 are arrested.

Sept. 27—5 convicted extremists are executed by a firing squad. Generalissimo Francisco Franco stayed the execution of 6 other nationalists previously sentenced to death.

Sept. 28—In Algorta, civil guards open fire and wound 6 Basque demonstrators who are protesting yesterday's execution of 5 terrorists.

Sept. 29—In the northern region, tens of thousands of Basques stage a strike to protest the execution of separatists by police.

SUDAN

Sept. 5—Government troops quash an uprising by rebel army officers. This is the 2d attempt to overthrow the government of President Gaafar al-Nimeiry since he seized power in 1969.

SYRIA

(See *Intl, Middle East; Lebanon*)

U.S.S.R.

(See also *U.S., Foreign Policy*)

Sept. 23—In a speech to the U.N. General Assembly, Foreign Minister Andrei Gromyko calls for a new international treaty to outlaw weapons of mass destruction.

UNITED KINGDOM

Great Britain

Sept. 5—A bomb explodes in the lobby of the London Hilton Hotel, killing 2 people and wounding 63.

Sept. 11—The government issues a 31-page white paper proposing ways to end racial discrimination.

Sept. 24—The government announces measures to reduce the high unemployment rate. The plan calls for government expenditures of \$350 million over the next 5 years.

Northern Ireland

Sept. 8—Protestant members of the United Ulster Unionist Council vote against sharing any administrative power with Roman Catholics.

Sept. 18—The Protestant Unionist coalition votes 36 to 6 against sharing a government role with the Roman Catholic Social Democratic and Labor party.

Sept. 22—Bombs explode in 9 towns; this is the worst day of violence since the cease-fire took effect in February.

UNITED STATES

Administration

Sept. 5—As President Ford walks 150 yards from his hotel to the California State Capitol in Sacramento, a woman identified as 26-year-old Lynette Fromme, a follower of Charles Manson, points a .45 caliber pistol at him. Secret Service Agent Larry Buendorf forces the pistol from the woman's hand before the President is harmed. Fromme is held in \$1-million bail after being arraigned in federal district court on a charge of attempted assassination of the President. President Ford returns to Washington, D.C.

Sept. 9—President Ford nominates the administrator of the Small Business Administration, Thomas D. Kleppe, to be Secretary of the Interior.

The President and Secretary of Labor John Dunlop meet with George Meany, president of the AFL-CIO, and Thomas Gleason, president of the Longshoremen's Association, and announce the temporary resumption for one month of the union loading of grain on ships headed for the U.S.S.R. The President also agrees to extend the present moratorium on new grain sales to the middle of October.

Sept. 10—Richard L. Dunham, deputy director of the White House Domestic Council, is nominated by President Ford to be chairman of the Federal Power Commission.

Sept. 11—Making public appearances for Republican senatorial candidate Louis Wyman across southern New Hampshire, President Ford appears to be wearing a bullet-proof vest.

Sept. 12—In a public interview in St. Louis, President Ford calls his encounters with crowds "an important part of my job"; he is determined to continue to meet the public face to face.

President Ford issues an order barring classified documents from the House Select Committee on Intelligence and demanding the return of classified material that is now in the committee's possession.

Sept. 16—At a news conference in the Oval Office of the White House, President Ford says that he will defy a subpoena ordering him to turn over

classified documents on the Vietnam war to the House Select Committee on Intelligence. A White House spokesman says later that the President hopes to work out a compromise with the committee.

Sept. 21—The administration announces the removal, retroactive to September 1, of the 60-cents-a-barrel fee on imported petroleum products.

Sept. 22—In the 2d assassination attempt against President Ford in 17 days, 45-year-old Sara Jane Moore fires a shot from a .38 caliber revolver at the President outside the St. Francis Hotel in San Francisco. A bystander deflects the shot and the woman is taken into custody by authorities and held in \$500,000 bail. The President is unharmed and returns to Washington, D.C., immediately.

Sept. 25—The Federal Communication Commission (FCC) rules that television and radio broadcasts of the news conferences and political debates of political candidates will no longer obligate the media to provide equal time to political opponents. This is a reversal of the previous policy of the FCC.

Economy

Sept. 2—U.S. Secretary of the Treasury William Simon addresses the annual meeting of the International Monetary Fund and the World Bank in Washington, D.C., and emphasizes the U.S. belief that another increase in the price of oil "would seriously jeopardize the balance on which global economic recovery depends."

Sept. 5—The Labor Department reports that overall unemployment remained unchanged in August at 8.4 percent of the work force; the index of wholesale prices rose 0.8 percent.

Sept. 15—The Federal Reserve Board reports an increase in industrial production of 1.3 percent for August.

Sept. 17—The Commerce Department reports a record surplus of \$4.1 billion in the balance of payments account in the second quarter of this fiscal year.

Sept. 19—The Labor Department reports the lowest rise in the consumer price index in 3 years for the month of August, 0.2 percent.

Foreign Policy

(See also *Intl, Middle East; Poland*)

Sept. 1—At the opening special session of the U.N. General Assembly, chief U.S. delegate Daniel Moynihan presents a series of proposals prepared by Secretary of State Henry Kissinger designed to help bridge the gap between the rich and the underdeveloped nations.

Kissinger flies to Amman, Jordan, from Saudi Arabia to confer with King Hussein; he has received an endorsement from Saudi King Khalid

for his new Israeli-Egyptian Sinai agreement.

Sept. 16—Senator Clifford Case (R., N.J.) announces a compromise agreement with the administration in which Congress will allow the sale of 14 Hawk anti-aircraft missile batteries to Jordan in return for the assurance of President Gerald Ford that the missiles will be "permanently installed" and used for defensive purposes only.

President Ford says that American diplomatic and defense assurances to Israel do not constitute a security treaty with Israel, although the U.S. will supply Israel with "very substantial military weaponry" as part of the understanding with regard to the Sinai agreement between Egypt and Israel.

Sept. 18—Premier Zaid al-Rifai of Jordan says that Jordan rejects the conditions attached to the sale of 14 Hawk missile batteries by the U.S. to Jordan.

Soviet Foreign Minister Andrei A. Gromyko meets with President Ford and Secretary of State Kissinger in Washington, D.C., to discuss a new treaty limiting nuclear arms.

Sept. 19—Jordanian officials inform the U.S. State Department privately that King Hussein of Jordan no longer objects to the conditions of sale attached by Congress to the sale of the 14 Hawk missiles and that the sale will go through.

Labor and Industry

(See also *Administration*)

Sept. 22—More than 90 percent of Boston's public school teachers strike because of a contract dispute.

Legislation

Sept. 9—President Gerald Ford vetoes a 6-month extension of domestic oil price controls.

With a 379-41 vote, the House overrides the presidential veto of a \$7.9-billion education appropriations bill.

Sept. 10—The Senate votes 88 to 12 to override President Ford's veto of the education appropriations bill.

By a 61-39 vote, 6 votes short of the necessary two-thirds margin, the Senate fails to override the President's veto of the domestic oil price control bill.

Sept. 19—The Senate passes the National School Lunch and Child Nutrition Act of 1975 by voice vote; the House voted 380 to 7 to approve the measure yesterday.

Sept. 25—The House votes 209 to 187 to reject a motion to reinstate the embargo on the importing of chrome ore from Rhodesia.

Sept. 26—The Senate votes 75 to 5 and the House votes 342 to 16 to approve and send to the White House legislation retroactive to September 1 that reinstates oil price controls until November 15. It

is expected that the extension will give Congress and the President time to work out a long-range energy policy for the United States.

Sept. 29—The President signs the oil price control bill.

Sept. 30—In a supplemental spending request, President Ford asks Congress for \$13.5 million to provide additional Secret Service agents, some of whom will be assigned to presidential candidates.

Military

Sept. 14—The Defense Department reports that the Grumman F-14 Tomcat fighter will cost an increased \$2 million, bringing the total to almost \$20 million per plane.

Sept. 10—A federal appeals court reinstates the court-martial conviction of William L. Calley, Jr., for the murder of Vietnamese civilians at My Lai.

Political Scandal

Sept. 2—According to Washington, D.C., sources, testimony before the Senate Select Committee on Intelligence shows that the U.S. military attaché in Chile was ordered by the Defense Department to give strong covert support to a military coup planned to keep Salvador Allende Gossens from the Chilean presidency in November, 1970, after he won the election in September.

Sept. 4—Presidential counsel Philip Buchen announces that the administration will give the Senate Select Committee access to Richard Nixon's presidential papers, to aid in its investigation of U.S. secret diplomacy in Chile.

Sept. 9—According to Chairman Frank Church (D., Id.), the Senate Select Committee will investigate the reported failure of the CIA to follow President Nixon's order to destroy the poisons in its possession.

Sept. 12—According to testimony before the Senate Foreign Relations Subcommittee on multinational corporations, the Lockheed Aircraft Corporation made payoffs or commitments to sales agents of \$106 million in Saudi Arabia alone between 1970 and mid-1975.

Sept. 14—Washington, D.C., sources report that top FBI officials ordered the destruction of a letter conveying threats of violence made by Lee Harvey Oswald 10 days before he assassinated President John F. Kennedy; The Dallas *Times Herald* reported the letter's existence 2 weeks ago.

Sept. 16—In testimony before the Senate Select Committee on Intelligence, CIA Director William Colby reports that the agency operated an 18-year, \$3-million supersecret project to develop secret devices, poisons and methods of delivering poisons until the project was halted in February, 1970.

Sept. 17—Former CIA Director Richard Helms testi-

fies that he issued oral orders to halt the CIA's biochemical weapons program and to destroy any stock, but failed to make sure his orders were carried out.

Sept. 22—A criminal investigation of the FBI's destruction of a threatening letter written by Lee Harvey Oswald to Dallas police before the assassination of President John Kennedy is begun by the Justice Department.

An attorney for former President Richard Nixon says that Nixon has denied under oath any "responsibility" for the 18½ minute erasure in a White House tape subpoenaed in connection with the Watergate scandal.

Sept. 24—The Senate Select Committee on Intelligence reveals that the CIA opened foreign mail to and from well-known Americans, including a letter to Richard Nixon, over a 20-year period.

Sept. 25—At least 238 illegal burglaries were committed by the FBI over a 26-year period, according to information made public today by the Senate Select Committee on Intelligence.

Political Terrorism

Sept. 18—Patricia Hearst, kidnapped by the Symbionese Liberation Army February 4, 1974, and later believed to have joined her kidnappers, is seized by the FBI and San Francisco police in San Francisco; Hearst's roommate, Wendy Yoshimura, is arrested at the same time. William and Emily Harris, who had been reported traveling with Hearst, were taken into custody an hour earlier at a different place of residence.

Sept. 19—A U.S. district court judge refuses to admit Patricia Hearst to bail.

Politics

Sept. 7—Republican party leaders choose Kansas City as the site for the 1976 Republican national convention.

Sept. 20—At a Washington, D.C., news conference, Sargent Shriver announces that he intends to become a candidate for the Democratic nomination for President in 1976.

Sept. 25—Milton Shapp, Democratic Governor of Pennsylvania, announces his intention to seek the Democratic presidential nomination in 1976.

Science and Space

Sept. 9—A second Viking 2 spacecraft is launched from Cape Canaveral on a mission to Mars.

ZAIRE

Sept. 20—In an attempt to bolster the economy, the government announces regulations that permit foreign companies to take only 10 percent of their profits out of the country; previously they were allowed to take out 30 percent.

FINANCING THE FEDERAL GOVERNMENT

**Table 1: Federal Budget Receipts, Outlays and Surplus
(Billions of Dollars)**

Year	Receipts	Outlays	Surplus or Deficit (-)
1930	4,058	3,320	732
1935	3,706	6,497	- 2,791
1940	6,361	9,456	- 3,095
1945	45,216	92,690	-47,474
1950	39,485	42,597	- 3,112
1955	65,469	68,509	- 3,041
1960	92,492	92,223	269
1965	116,833	118,430	- 1,596
1970	193,743	196,588	- 2,845
1975	278,750	313,446	-34,696
1976	297,520	349,372	-51,852

Sources: *Economic Report of the President, 1972* (Washington, D.C.: U.S. Government Printing Office, 1972), Table B-63.
Economic Report of the President, 1975 (Washington, D.C.: U.S. Government Printing Office, 1975), Table C-64.

Table 3: Total and Federal Government Employment

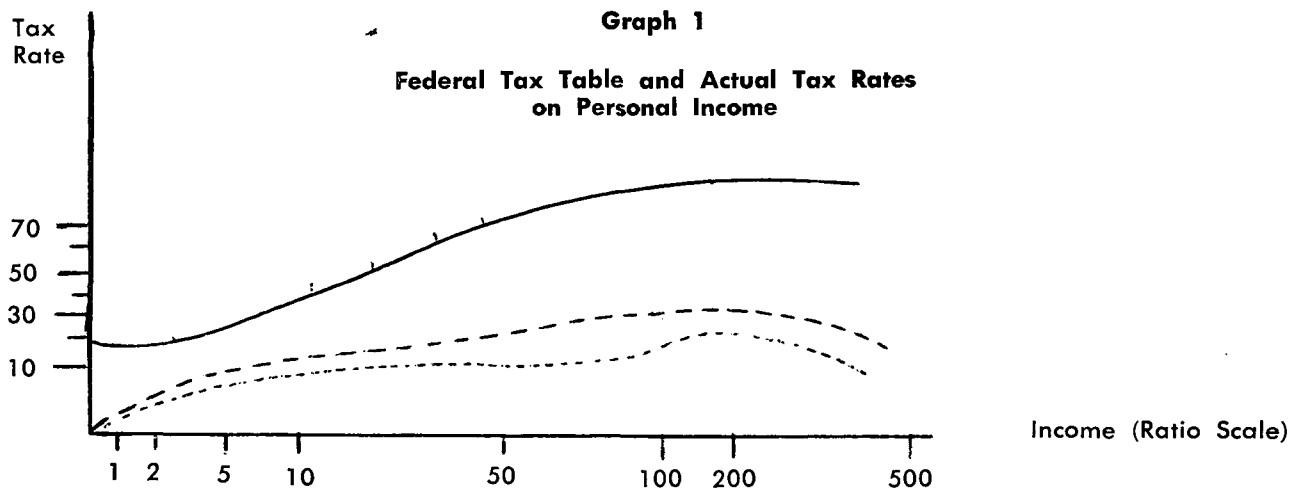
Year	Total Labor Force	Federal Government Workers (not in Armed Forces)	Government Workers (Armed Forces)	% of Total
1930	50,080	526	260	01.06
1935	53,140	753	270	1.41
1940	56,180	996	540	1.77
1945	65,300	2,808	11,440	4.30
1950	63,858	1,928	1,650	3.02
1955	68,072	2,187	3,049	3.21
1960	72,142	2,240	2,514	3.14
1965	77,178	2,378	2,723	3.08
1970	85,903	2,735	3,188	3.18
1974	93,240	2,725	2,229	2.92

Sources: *Economic Report of the President, 1972*, Tables B-22, B-27.
Economic Report of the President, 1975, Tables C-24, C-29.

**Table 2: Federal Government Debt and Total Debt
(Billions of Dollars)**

Year	Total Debt	Federal Debt	Federal Debt as % of GNP	Federal Debt as % of Total Debt	Net Interest Paid	Mortgage Debt
1930	192.3	16.5	18.25	8.58		
1935	175.0	34.4	47.65	19.66		
1940	189.8	44.8	44.93	23.60		36.5
1945	405.9	252.5	119.16	62.21		35.5
1950	486.2	217.4	76.33	44.71	4.4	72.8
1955	665.8	229.6	57.64	34.48	4.9	129.9
1960	874.2	239.8	47.61	27.43	7.0	206.8
1965	1,224.1	226.4	33.06	18.56	8.5	325.8
1970	1,868.9	301.1	30.82	16.11	14.0	451.7
1973	2,525.8	349.1	26.96	13.82	19.8	635.0

Sources: *Economic Report of the President, 1972*, Tables B-1, B-61, B-62, B-66.
Economic Report of the President, 1975, Tables C-1, C-61, C-63, C-66.



Solid Line — Rates as published in tax tables.

Dotted Lines — Estimates of Actual Tax Rate.

Sources: Joseph Pechman, "The Rich, the Poor and the Taxes They Pay," *The Public Interest*, no. 17 (Fall 1969), pp. 21-43.

John G. Gurley, "Federal Tax Policy," *National Tax Journal*, vol. 20, no. 3, (1967), pp. 319-327.

AVAILABLE FROM Current History

Academic Year 1975-1976

- ☐ World Food Resources (6/75)
- ☐ Energy and Scarce World Resources (7-8/75)
- ☐ The People's Republic of China, 1975 (9/75)
- ☐ The Soviet Union, 1975 (10/75)
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